Hisense

DC INVERTER AIR CONDITIONER

SERVICE MANUAL

V:3.0

UNIT:

AUD-18UX4SGKL
AUD-24UX4SZLH
AUD-36UX4SAMH
AUD-48UX6SPHH
AUD-60UX6SPHH

AUD-18UX4SZKL1
AUD-24UX4SALH1
AUD-36UX4SAMH1

AUV-18UR4SZA1
AUV-24UR4SAA1
AUV-36UR4SAB1
AUV-48UR6SPC
AUV-60UR6SPC

AUC-18UX4SGAA
AUC-24UX4SZEA
AUC-36UX4SAEA
AUC-48UX6SPFA
AUC-60UX6SPFA

AUC-18UR4SZAA1
AUC-24UR4SAEA1
AUC-36UR4SAEA1

Hisense Corporation

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1.1 Features

Duct Type Air Conditioner

Features

- **Save Installation Space**

  The indoor unit can be installed inside the ceiling conveniently.

- **Optional Static Pressure**

18k: optional 10Pa /30Pa, 24K/36K 50Pa/80Pa(For AUD-24UX4SALH1&AUD-36UX4SAMH1，freely changed between1-80Pa), 48K/60K: 80Pa/120Pa static Pressure.

  One unit, mute optional installation method.

- **High Efficiency and Environment Friendly New Refrigerant-R410A**

  R410A can protect the environment and do not harm to the ozone layer.

- **24-hour Timer ON and OFF**

  This Timer can be set to automatically turn the unit on or off within a 24-hour period.

- **Mute Operation**

  The excellent fan design enable the airflow to be quiet and smooth with minimum noise.

- **Meeting Various Installation Requirements**

  The back-air-inlet type is usually to be adopted according to the actual installation space.

The unit is also installed with down-air-inlet type and the noise will increase about 5-6 dB.

- **Self Recovery of Power Break**

  When the power supply is recovered after break, all preset are still effective and the air-conditioner can run according to the original setting.

- **Fault Self-diagnose Function**

  When there is something wrong with the air-conditioner，the micro computer could diagnose the faults, which can be read from the display and is convenient for maintenance.

Cassette Type Air Conditioner

Features

- **Save Installation Space**

  The indoor unit can be installed inside the ceiling conveniently.

- **High Efficiency and Environment Friendly New Refrigerant-R410A**

  R410A can protect the environment and do not harm to the ozone layer.

- **24-hour Timer ON and OFF**

  This Timer can be set to automatically turn the unit on or off within a 24-hour period.

- **Mute Operation**

  The excellent fan design enable the airflow to be quiet and smooth with minimum noise.

- **Self Recovery of Power Break**

  When the power supply is recovered after break, all preset are still effective and the air-conditioner can run according to the original setting.

- **Fault Self-diagnose Function**

  When there is something wrong with the air-conditioner, the micro computer could diagnose the faults, which can be read from the display and is convenient for maintenance.

Ceiling &Floor Air Conditioner

Features

- **Save Installation Space**

The indoor unit's thickness is only 230mm,can be installed inside the ceiling conveniently.

- **Flexible Installation Options**

According to the actual installation space,The indoor unit can be installed in the ceiling or on the floor. One unit, Two installation method.

- **High Efficiency and Environment Friendly**

New Refrigerant-R410A

R410A can protect the environment and do not harm to the ozone layer.

- **24-hour Timer ON and OFF**

This Timer can be set to automatically turn the unit on or off within a 24-hour period.

- **Mute Operation**

The excellent fan design enable the airflow to be quiet and smooth with minimum noise.

- **Various Refrigerant Pipe Connect Methods**

The refrigerant pipe can be connect from 3 different directions(rear,right or top) .More methods, more conveniently.

- **Self Recovery of Power Break**

When the power supply is recovered after break, all preset are still effective and the air-conditioner can run according to the original setting.

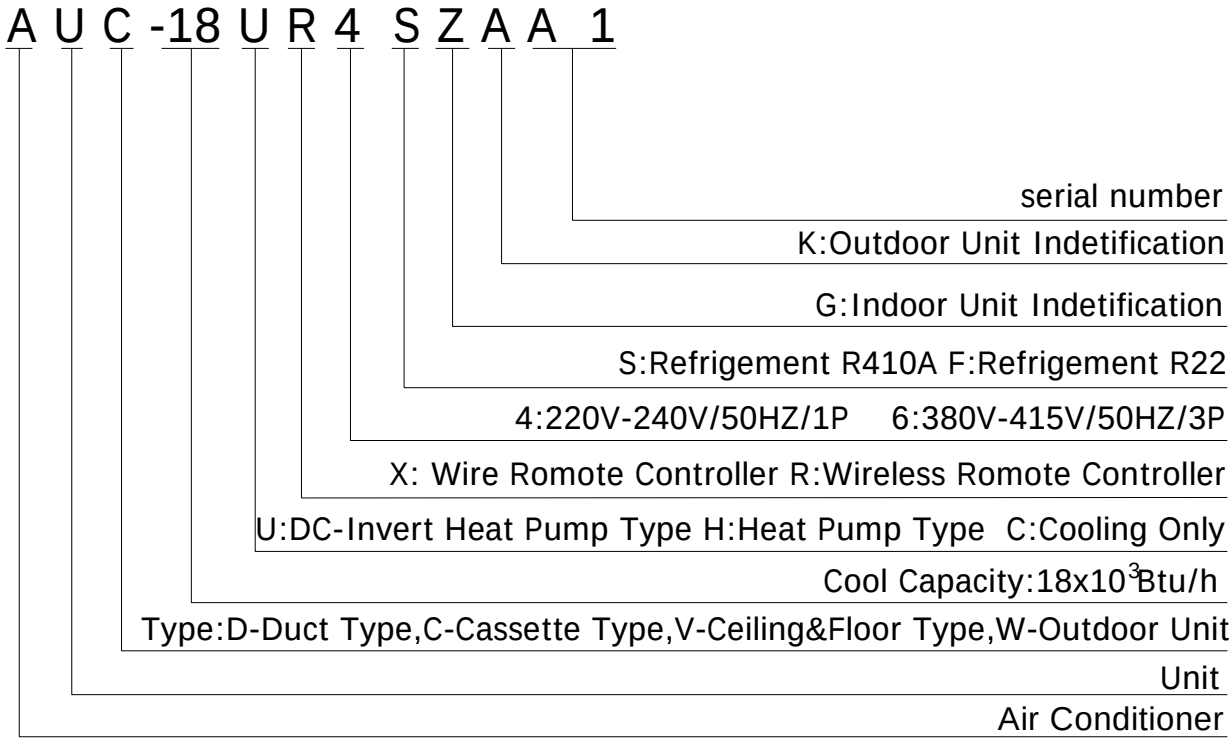
- **Fault Self-diagnose Function**

When there is something wrong with the air-conditioner, the micro computer could diagnose the faults, which can be read from the display and is convenient for maintenance.

1.2 Product Lineup

Type	Model	18	24	36	48	60
Duct Type	AUD-	●	●	●	●	●
Cassette Type	AUC-	●	●	●	●	●
Ceiling&Floor type	AUV-	●	●	●	●	●

1.3 MODEL IDENTIFICATION



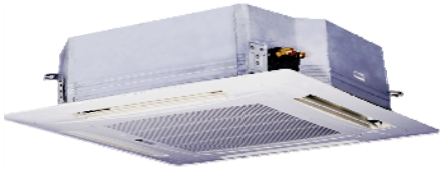
1.4 Product Picture

Duct Type

Model	AUD-18UX4SGKL	AUD-24UX4SZLH
Indoor		
Outdoor		
Model	AUD-36UX4SAMH	AUD-48UX6SPHH AUD-48UX6SPHH
Indoor		
Outdoor		

Model	AUD-18UX4SZKL1	AUD-24UX4SALH1
Indoor		
Outdoor		
Model	AUD-36UX4SAMH1	
Indoor		
Outdoor		

Cassette Type

Model	AUC-18UX4SGAA	AUC-24UX4SZEA
Indoor		
Outdoor		
Model	AUC-36UX4SAEA	AUC-48UX6SPFA AUC-60UX6SPFA
Indoor		
Outdoor		

Model	AUC-18UR4SZAA1	AUC-24UR4SAEA1 AUC-36UR4SAEA1
Indoor		
Outdoor		

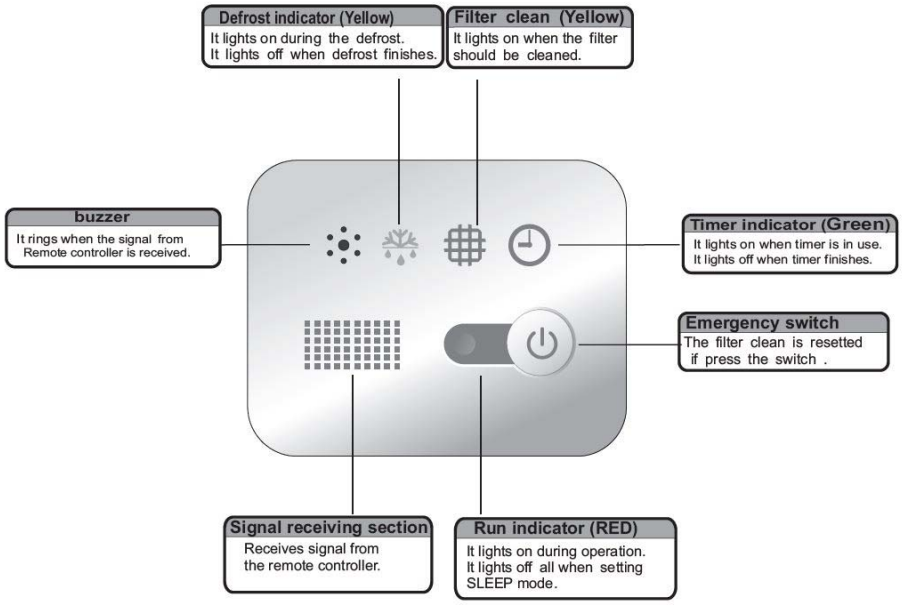
Ceiling &Floor Type

Model	AUV-18UR4SZA1	AUV-24UR4SAA1
Indoor		
Outdoor		
Model	AUV-36UR4SAB1	AUV-48UR6SPC AUV-60UR6SPC
Indoor		
Outdoor		

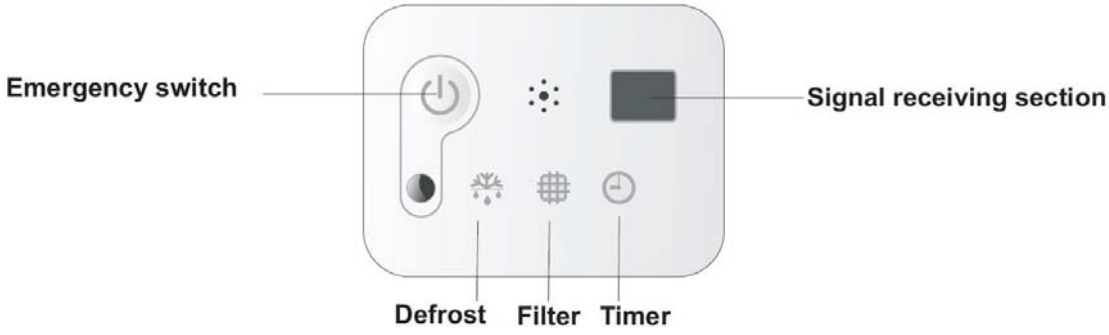
DISPLAY PANEL:

Cassette Type

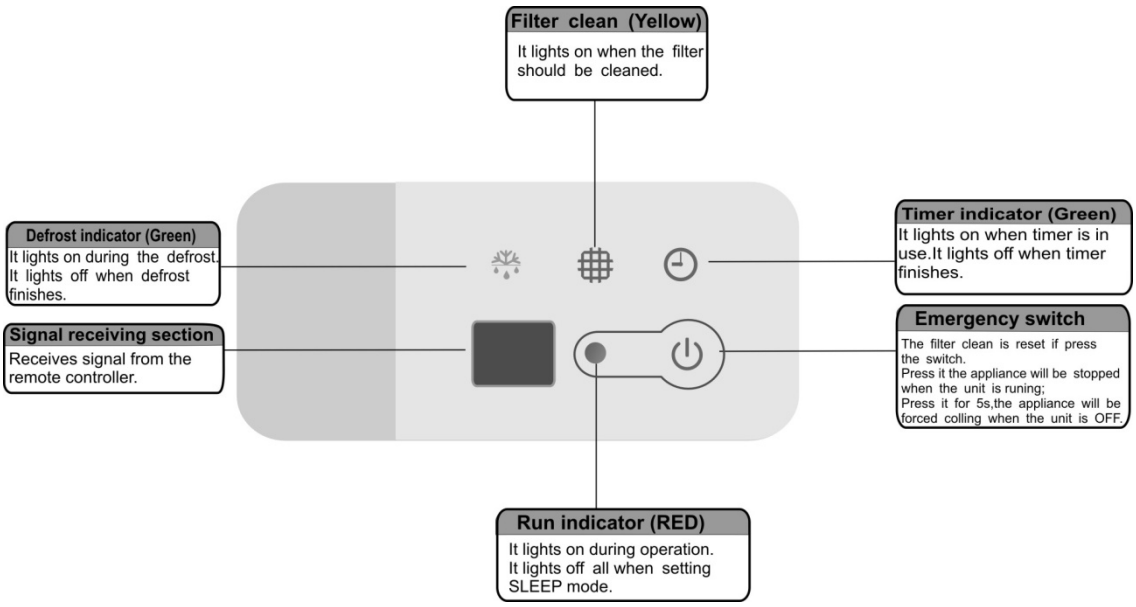
18k


Defrost indicator (Yellow)
It lights on during the defrost.
It lights off when defrost finishes.
Filter clean (Yellow)
It lights on when the filter should be cleaned.
buzzer
It rings when the signal from Remote controller is received.
Timer indicator (Green)
It lights on when timer is in use.
It lights off when timer finishes.
Emergency switch
The filter clean is resetted if press the switch .
Signal receiving section
Receives signal from the remote controller.
Run indicator (RED)
It lights on during operation.
It lights off all when setting SLEEP mode.

24K，36K，48K，60K



Ceiling&Floor type


Filter clean (Yellow)
It lights on when the filter should be cleaned.
Defrost indicator (Green)
It lights on during the defrost. It lights off when defrost finishes.
Signal receiving section
Receives signal from the remote controller.
Timer indicator (Green)
It lights on when timer is in use.It lights off when timer finishes.
Emergency switch
The filter clean is reset if press the switch.
Press it the appliance will be stopped when the unit is runing;
Press it for 5s,the appliance will be forced colling when the unit is OFF.
Run indicator (RED)
It lights on during operation.
It lights off all when setting SLEEP mode.

2. Specifications

Duct Type

Model			AUD-18UX4SZKL1	AUD-24UX4SALH1	AUD-36UX4SAMH1	AUD-18UX4SGKL	AUD-24UX4SZLH	AUD-36UX4SAMH	AUD-48UX6SPHH	AUD-60UX6SPHH
Indoor model			AUD-18UX4SKL1	AUD-24UX4SLH1	AUD-36UX4SMH1	AUD-18UX4SKL	AUD-24UX4SLH	AUD-36UX4SMH	AUD-48UX4SHH	AUD-60UX4SHH
Outdoor model			AUW-18U4SZ1	AUW-24U4SA1	AUW-36U4SA1	AUW-18U4SG	AUW-24U4SZ	AUW-36W4SA	AUW-48U6SP	AUW-60U6SP
Power supply		Ph-V-Hz	20V-240V ~/50Hz						380V-415V，3N~/50Hz	
Capacity	Cooling	kW	5	7	9.2	5	6.4	10	12.6	17
		Btu/h	17,000	23,900	31,400	17,000	21,800	34,100	43,000	58,000
	Heating	kW	5.6	8.1	11	5.6	7.25	11.5	15	20.5
		Btu/h	19,100	27,600	37,500	19,100	24,700	39,200	51,200	70,000
Dehumidification		L/h	1.4	1.8	2.4	1.4	1.8	2.4	3.3	4.5
Rated input	Cooling	kW	1.5	2.3	3.05	1.552	1.99	3.11	3.92	5.295
	Heating	kW	1.6	2.65	3.25	1.55	2	3.19	4.15	5.65
Rated Current	Cooling	A	6.8	10.2	13.9	6.9	8.9	13.5	7.5	10.8
	Heating	A	7.3	11.5	13.1	6.9	8.9	13.9	8	11.3
Max. input		kW	2.5	3.6	5.1	2.58	3	5.23	6.2	9.38
Max.Current		A	12	15.9	22.5	11.5	13.5	22.78	13	17.7
EER/COP			3.33/3.5	3.04/3.06	3.04/3.06	3.22/3.61	3.22/3.63	3.22/3.61	3.21/3.61	3.21/3.63
SEER/SCOP			5.6/3.8	5.6/3.8	5.1/3.8	/	/	/	/	/
Cooling Energy Class			A+	A+	A	A	A	A	A	A
Heating Energy Class			A	A	A	A	A	A	A	A
Compressor	Model		DA131S1B-28FZ	DA230S2C-31MT	DA250S2C-30MT	DA130S1C-20FZ	ATL165SD-C9AU	DA250S2C-30MT	TNB306FPNMC	LNB42FSAMC
	Type		Rotary							
	Winding resistance	Ω	0.55（20℃）	0.73 (at20℃)	055（20℃）	0.95（20℃）	0.59	0.95（20℃）	U-V:	U-V:

Model				AUD-18UX4SZKL1	AUD-24UX4SALH1	AUD-36UX4SAMH1	AUD-18UX4SGKL	AUD-24UX4SZLH	AUD-36UX4SAMH	AUD-48UX6SPHH	AUD-60UX6SPHH
Indoor model				AUD-18UX4SKL1	AUD-24UX4SLH1	AUD-36UX4SMH1	AUD-18UX4SKL	AUD-24UX4SLH	AUD-36UX4SMH	AUD-48UX4SHH	AUD-60UX4SHH
Outdoor model				AUW-18U4SZ1	AUW-24U4SA1	AUW-36U4SA1	AUW-18U4SG	AUW-24U4SZ	AUW-36W4SA	AUW-48U6SP	AUW-60U6SP
										2433;U-W :2433;	2433;U-W :2433;
										V-W: 2.304 (at 25℃)	V-W: 2.304 (at 25℃)
	Brand		GMCC		GMCC	GMCC	GMCC	HIGHLY	GMCC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
Fan motor	Indoor	Model		YSK110-40-4-A(HS16)	SIC-70CW-F195 -1	SIC-101CW-F1246 -1	YSK110-40-4-A(HS16)	Y6S419C56	Y7S423C024	Y7S423C032	Y7S423C032
	Outdoor	Model		ARW4401QH	SIC-71FW-D812 1-1	SIC-71FW-D8121-1	YDK29-6I-22	YDK70-6H-3	YDK95-6-9043	YDK65-6-9024 YDK65-6-9061	YDK65-6-9024 YDK65-6-9061
Fan	Indoor	type		centrifugal fan							
		Speed Hi/Med/Low	r.p.m	1130/850/950(10 Pa)	1000/910/810(30 Pa)	1060/980/900(30P a)	1130/850/950(10 Pa)	1070/990/860(50 Pa)	1150/1070/1020(50Pa)	1250/1200/1100(120Pa)	1250/1200/1100(120Pa)
Fan speed	Outdoor	type	r.p.m	tube-axial							
		Speed Hi/Med/Low	r.p.m	0-810	0-810	0-810	900/750/500	840/780/560	800/640/540	700/600/500	700/600/500
Air circulation	Indoor	Hi/Med/Low	m³/h	850	1100	1800	850	1100	1700	2000	2000
	Outdoor	Hi/Med/Low	m³/h	--	--	--	--	--	--	--	--
Static Pressure(*Default Setting)			Pa	10*/30	30*/(1~80 optional)	30*/(1~80 optional))	10*/30	50*/80	50*/80	80*/120	80*/120
Operating control				Wireless Remote control-J1-05(E)							
Dimensions	Indoor	L×W×H	mm	1170×447×190	900×720×270	1300×720×270	1170×447×190	900×720×270	1300×720×270	1300×800×350	1300×800×350
	Outdoor	L×W×H	mm	900×300×640	950×340×840	950×340×840	800×260×570	900×300×640	940×340×840	950×340×1386	950×340×1386
Packing	Indoor	L×W×H	mm	1340×580×236	1170X340X870	1570X340X870	1340×580×236	1170X340X870	1570X340X870	1550X940X410	1550X940X410
	Outdoor	L×W×H	mm	1050×400×700	1110×460×980	1110×460×980	950×365×645	1050×700×400	1110×460×980	1110×460×1530	1110×460×1530
Weight	Indoor	Net/Gross	kg	24/28	32/37	43/51	24/28	32/37	38/43	50/58	50/58

Model				AUD-18UX4SZKL1	AUD-24UX4SALH1	AUD-36UX4SAMH1	AUD-18UX4SGKL	AUD-24UX4SZLH	AUD-36UX4SAMH	AUD-48UX6SPHH	AUD-60UX6SPHH
Indoor model				AUD-18UX4SKL1	AUD-24UX4SLH1	AUD-36UX4SMH1	AUD-18UX4SKL	AUD-24UX4SLH	AUD-36UX4SMH	AUD-48UX4SHH	AUD-60UX4SHH
Outdoor model				AUW-18U4SZ1	AUW-24U4SA1	AUW-36U4SA1	AUW-18U4SG	AUW-24U4SZ	AUW-36W4SA	AUW-48U6SP	AUW-60U6SP
	Outdoor	Net/Gross	kg	45/51	69/73	70/74	35.5/39	50/56	70/74	101/107	108/112
Noise lever	Indoor	Hi/Med/Low	dB(A)	--/54(SOUND POWER)	--/61(SOUND POWER)	--/56(SOUND POWER)	--/41	43/49	43/51	49/53	49/53
	Outdoor	Hi/Med/Low	dB(A)	--/62(SOUND POWER)	--/65(SOUND POWER)	--/70(SOUND POWER)	--/56	53/58	--/58	--/60	--/60
Refrigerant piping	Gas/Liquid		mm	12.7/6.35	15.88/9.52	15.88/9.52	12.7/6.35	15.88/9.52	15.88/9.52	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	20	30	30	20	30	30	50	50
	Max. difference in level		m	10	20	20	10	15	15	30	30
	Connection method			Flare							
Connection	Power wiring		mm²	3 core x1.5	3 core x2.5	3 core x2.5	3 core x1.5	3 core x2.5	3 core x2.5	5 core x2.5	5 core x2.5
wiring	Signal wiring		mm²	4core x0.75	4core x0.75	4core x0.75	4core x0.75	4core x0.75	4core x0.75	4core x0.75	4core x0.75
Refrigerant charge(R410a)			kg	1.4	1.68	2.1	1.27	1.5	2.1	3	3.5
Throttle Type				EEV	EEV	EEV	EEV	EEV	EEV	EEV	EEV
Ambient temp			℃	Cooling -15 ~ 48							
				Heating -10 ~ 24							

Cassette type

Model			AUC-18UR4SZAA1	AUC-24UR4SAEA1	AUC-36UR4SAEA1	AUC-18UX4SGAA	AUC-24UX4SZEA	AUC-36UX4SAEA	AUC-48UX6SPFA	AUC-60UX6SPFA
Indoor model			AUC-18UR4SAA1	AUC-24UR4SEA1	AUC-36UR4SEA1	AUC-18UX4SAA	AUC-24UX4SEA	AUC-36UX4SEA	AUC-48UX4SFA	AUC-60UX4SFA
Outdoor model			AUW-18U4SZ1	AUW-24U4SA1	AUW-36U4SA1	AUW-18U4SG	AUW-24U4SZ	AUW-36W4SA	AUW-48U6SP	AUW-60U6SP
Power supply		Ph-V-Hz	20V-240V ~/50Hz						380V-415V，3N~/50Hz	
Capacity	Cooling	kW	5 (1.2-6.5)	7.0 (2.2-8.0)	9.5 (3.6 ~ 10.5)	5	6.4	10	12	17
		Btu/h	17,100(4,100-22,200)	23,900 (7,500-27,300)	32,400 (12,300-35,800)	17000	21800	34100	41000	58000
	Heating	kW	5.6(1.8-7.2)	8.2 (2.5-10)	11.0(3.05 ~ 13.8)	5.6	7	11.5	15	20
		Btu/h	19,100(6,100-24,600)	28,000 (8,500-34,100)	37,500 (10,400-47,100)	19100	23900	39200	51200	68200
Dehumidification		L/h	——	——	——	——	——	——	——	——
Rated input	Cooling	kW	1.49 (0.40 ~ 2.25)	2.3 (0.40 ~ 3.6)	3.07(0.4 ~ 4.2)	1.552	1.91	3.07	3.72	5.095
	Heating	kW	1.75(0.38 ~ 2.15)	2.73(0.38 ~ 3.6)	3.10(0.38 ~ 4.2)	1.55	1.92	3.15	3.95	5.45
Rated Current	Cooling	A	6.6	10.1	13.4	6.9	8.5	13.36	6.5	6.5
	Heating	A	7.8	12.2	13.5	6.89	8.5	13.76	7	7
Max. input	Cooling	kW	2.5	3.6	4.25	2.421	2.92	4.55	5.32	8.5
	Heating	kW	2.5	3.6	4.25	2.581	2.72	4.85	5.92	9.1
Max.Current	Cooling	A	12	15.5	20	9.9	13.1	19.83	10.7	10.7
	Heating	A	12	15.5	20	11.47	12.1	21.13	11.7	11.7
EER/COP			3.36/3.20	3.04/3.0	3.09/3.55	3.22/3.61	3.35/3.64	3.26/3.65	3.39/3.8	3.34/3.67
SEER/SCOP			5.6/3.8	5.6/3.8	5.1/3.8	/	/	/	/	/
Cooling Energy Class			A+	A+	A	A	A	A	A	A
Heating Energy Class			A	A	A	A	A	A	A	A

Model					AUC-18UR4SZAA1	AUC-24UR4SAEA1	AUC-36UR4SAEA1	AUC-18UX4SGAA	AUC-24UX4SZEA	AUC-36UX4SAEA	AUC-48UX6SPFA	AUC-60UX6SPFA
Indoor model					AUC-18UR4SAA1	AUC-24UR4SEA1	AUC-36UR4SEA1	AUC-18UX4SAA	AUC-24UX4SEA	AUC-36UX4SEA	AUC-48UX4SFA	AUC-60UX4SFA
Outdoor model					AUW-18U4SZ1	AUW-24U4SA1	AUW-36U4SA1	AUW-18U4SG	AUW-24U4SZ	AUW-36W4SA	AUW-48U6SP	AUW-60U6SP
Compressor	Model				DA131S1B-28FZ	DA230S2C-31MT	DA250S2C-30MT	DA130S1C-20FZ	ATL165SD-C9AU	DA250S2C-30MT	TNB306FPNMC	LNB42FSAMC
	Type				Rotary							
	Winding resistance		Ω		0.55（20℃）	0.73 (at20℃)	055（20℃）	0.95（20℃）	0.59	0.95（20℃）	U-V: 2433;U-W :2433;	U-V: 2433;U-W :2433;
											V-W: 2.304（at 25℃）	V-W: 2.304（at 25℃）
	Brand				GMCC	GMCC	GMCC	GMCC	HIGHLY	GMCC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
Fan motor	Indoor			Model	EHDS50AQ	ARW5901QH	EHDS50AQH	YDK95-28-4-B	ARW5901QH	EHDS50AQH	SIC72FW-D8124-2B	SIC72FW-D8124-2B
	Outdoor			Model	ARW4401QH	SIC-71FW-D8121-1	SIC-71FW-D8121-1	YDK29-6I-22	YDK70-6H-3	YDK95-6-9043	YDK65-6-9024 YDK65-6-9061	YDK65-6-9024 YDK65-6-9061
Fan	Indoor	type			centrifugal fan							
		Speed Hi/Med/Low		r.p.m	980/840/720	440/380/370	630/520/460	980/840/720	440/370/280	630/520/460	630/520/460	630/520/460
Fan speed	Outdoor	type		r.p.m	tube-axial							
		Speed Hi/Med/Low		r.p.m	0-810	0-810	0-810	900/750/500	840/780/560	800/640/540	700/600/500	700/600/500
Air circulation	Indoor	Hi/Med/Low		m^3/h	850	1100	1600	850	1100	1600	2000	2400
	Outdoor	Hi/Med/Low		m^3/h	--	--	--	--	--	--	--	--
Static Pressure(*Default Setting)				Pa	0	0	0	0	0	0	0	0
Operating control					Wireless Remote control（J1-05）							
Dimensions	Indoor	L×W×H		mm	650×570×270	840×840×248	840×840×248	650×570×270	840×840×248	840×840×248	840×840×298	840×840×298
	Outdoor	L×W×H		mm	900×300×640	950×340×840	950×340×840	800×260×570	900×300×640	940×340×840	950×340×1386	950×340×1386

Model				AUC-18UR4SZAA1	AUC-24UR4SAEA1	AUC-36UR4SAEA1	AUC-18UX4SGAA	AUC-24UX4SZEA	AUC-36UX4SAEA	AUC-48UX6SPFA	AUC-60UX6SPFA
Indoor model				AUC-18UR4SAA1	AUC-24UR4SEA1	AUC-36UR4SEA1	AUC-18UX4SAA	AUC-24UX4SEA	AUC-36UX4SEA	AUC-48UX4SFA	AUC-60UX4SFA
Outdoor model				AUW-18U4SZ1	AUW-24U4SA1	AUW-36U4SA1	AUW-18U4SG	AUW-24U4SZ	AUW-36W4SA	AUW-48U6SP	AUW-60U6SP
	Panel	L×W×H	mm	650×650×30	950×950×37	950×950×37	650×650×30	950×950×37	950×950×37	950×950×37	950×950×37
Packing	Indoor	L×W×H	mm	770×750×310	930×930×290	930×930×290	770×750×310	930×930×290	930×930×290	930×930×340	930×930×340
	Outdoor	L×W×H	mm	1050×400×700	1110×460×980	1110×460×980	940×360×640	1050×700×400	1110×460×980	1110×460×1530	1110×460×1530
	Panel	L×W×H	mm	730×730×130	1010×990×95	1010×990×115	730×730×130	1010×990×95	1010×990×95	1010×990×95	1010×990×95
Weight	Indoor	Net/Gross	kg	21/25.5	24/30	26/32	21/25.5	24/30	26/32	29/35	29/35
	Outdoor	Net/Gross	kg	45/51	69/73	70/74	35.5/39	50/56	70/74	101/107	108/112
	Panel	Net/Gross	kg	2.4/5	6/7.5	6/7.5	2.4/5	6/7.5	6/7.5	6/7.5	6/7.5
Noise lever	Indoor	Low/Hi/sound power	Db	--/48/58	36/42/53	--/50/61	--/48	36/42	--/50	43/49	43/49
	Outdoor	Low/Hi/sound power	Db	45/50/62	--/58/70	--/58/70	--/56	53/58	--/58	--/60	--/60
Refrigerant piping	Gas/Liquid		mm	12.7/6.35	15.88/9.52	15.88/9.52	12.7/6.35	15.88/9.52	15.88/9.52	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length		m	20	30	30	20	30	30	50	50
	Max. difference in level		m	10	20	20	10	15	15	30	30
	Connection method			Flare							
Connection wiring	Power wiring		mm^2	3 core x1.5	3 core x2.5	3 core x2.5	3 core x1.5	3 core x2.5	3 core x2.5	5 core x2.5	5 core x2.5
	Signal wiring		mm^2	4 core shielded wire x 0.75			4core x0.75	4core x0.75	4core x0.75	4core x0.75	4core x0.75
Refrigerant charge(R410a)			kg	1.4	1.68	2.1	1.27	1.5	2.1	3	3.5
Throttle Type				EEV	EEV	EEV	EEV	EEV	EEV	EEV	EEV
Ambient temp			℃	Cooling -15 ~ 48							
				Heating -10 ~ 24							

Ceiling & Floor type

Model			AUV-18UR4SZA1	AUV-24UR4SAA1	AUV-36UR4SAB1	AUV-48UR6SPC	AUV-60UR6SPC
Power supply		Ph-V-Hz	1N,220V-240V/50Hz			3N~,380V-415V/50Hz	
Capacity	Cooling	kW	5.0	7.0	9.2	12.6	17.0
		Btu/h	17,000	23,900	31,400	43,000	58,000
	Heating	kW	5.8	8.6	11.0	15.3	20.5
		Btu/h	19,800	29,000	37,500	52,200	70,000
Dehumidification		L/h	1.4	1.8	2.4	3.3	4.5
Rated input	Cooling	kW	1.55	2.3	3.05	3.92	5.295
	Heating	kW	1.75	2.77	3.3	4.2	5.65
Rated Current	Cooling	A	7.0	10.1	13.9	7.5	10.8
	Heating	A	8.0	13.0	15.0	8.0	11.3
Max. input		kW	2.5	3.6	5.1	6.2	9.38
Max.Current		A	12.0	15.9	22.5	13.0	17.7
EER/COP			3.33/3.31	3.04/3.10	3.02/3.33	3.21/3.64	3.21/3.61
SEER/SCOP			5.6/3.8	5.6/3.8	5.1/3.8	/	/
Compressor	Model		DA131S1B-28FZ	DA230S2C-31MT	DA250S2C-30MT	TNB306FPNMC	LNB42FSAMC
	Type		Rotary				
	Winding resistance	Ω	M:2.1，A:2.81	M:1.37，A:1.7	U-V: 2.806;U-W :2.806;	U-V: 2433;U-W :2433;	U-V: 2433;U-W :2433;
					V-W: 2.651 （at 25℃）	V-W: 2.304（at 25℃）	V-W: 2.304（at 25℃）
	Brand		GMCC	GMCC	GMCC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
Fan motor	Indoor	Model	YSK110-22-4-A(HS24)	SIC-70CW-F1100-6	SIC-70CW-F1140-3	Y7S423C032	Y7S423C032

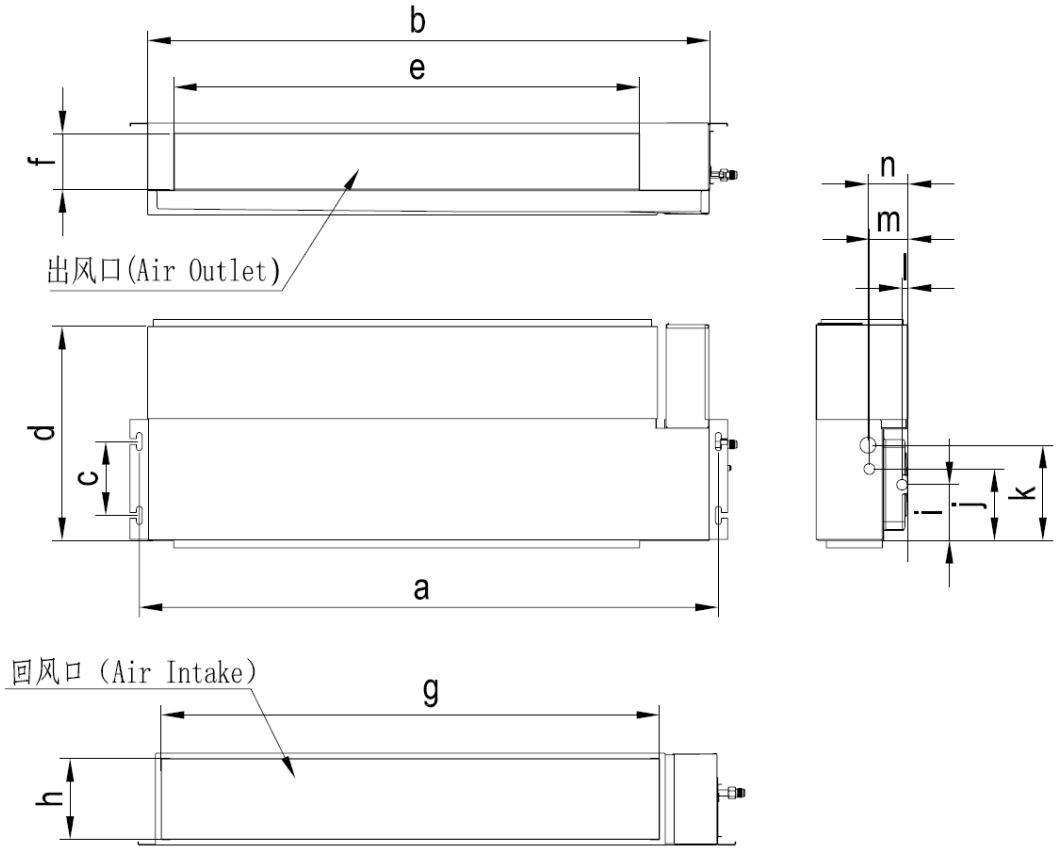
Model				AUV-18UR4SZA1	AUV-24UR4SAA1	AUV-36UR4SAB1	AUV-48UR6SPC	AUV-60UR6SPC
			Winding resistance (at20℃)	M:187A:245,60,33,143	M:209.4;A:245,60,33,143	M:75;A:97.5	M:79.7;A:59.4,20.2,108	M:79.7;A:59.4,20.2,108
	Outdoor		Model	ARW4401QH	SIC-71FW-D8121-1	SIC-71FW-D8121-1	YDK65-6-9024	YDK65-6-9024
							YDK65-6-9061	YDK65-6-9061
			Winding resistance (at20℃)	M:231.5;A:168	M:78;A:36.2,51.5,109.2	M:59.1;A:85.8	M:83;A1:23.4A2:14A1:63.5	M:83;A1:23.4A2:14A1:63.5
Fan	Indoor	type		centrifugal fan				
		Speed Hi/Med/Low	r.p.m	630/720/850	910/1030/1150	1080/1160/1220	1000/1100/1200	1000/1100/1200
Fan speed	Outdoor	type	r.p.m	tube-axial				
		Speed Hi/Med/Low	r.p.m	0-810	0-810	0-810	500/600/700	500/600/700
Air circulation	Indoor	Hi/Med/Low	m³/h	800	1100	1600	2000	2000
	Outdoor	Hi/Med/Low	m³/h	--	--	--	--	--
Static Pressure(*Default Setting)			Pa	0	0	0	0	0
Operating control				Wireless Remote control-J1-05(E)				
Dimensions	Indoor	L×W×H	mm	990×680×230	990×680×230	1290×680×230	1580×680×230	1580×680×230
	Outdoor	L×W×H	mm	900×300×640	950×340×840	950×340×840	950×340×1386	950×340×1386
Packing	Indoor	L×W×H	mm	1100×820×350	1100×820×350	1400×820×350	1690×820×350	1690×820×350
	Outdoor	L×W×H	mm	1050×700×400	1110×460×980	1110×460×980	1110×460×1530	1110×460×1530
Weight	Indoor	Net/Gross	kg	27/33	30/35	37/44	47/54	47/54
	Outdoor	Net/Gross	kg	45/51	69/73	70/74	101/107	108/112
Noise lever	Indoor	Hi/Med/Low	dB(A)	--/54(SOUND POWER)	--/63(SOUND POWER)	--/64(SOUND POWER)	48/50/53	48/50/53
	Outdoor	Hi/Med/Low	dB(A)	--/62(SOUND POWER)	--/65(SOUND POWER)	--/70(SOUND	--/60	--/60

Model			AUV-18UR4SZA1	AUV-24UR4SAA1	AUV-36UR4SAB1	AUV-48UR6SPC	AUV-60UR6SPC
					POWER)		
Refrigerant piping	Gas/Liquid	mm	12.7/6.35	15.88/9.52	15.88/9.52	19.05/9.52	19.05/9.52
	Max. refrigerant pipe length	m	15	30	30	50	50
	Max. difference in level	m	7.5	15	15	20 (outdoor blow : 15)	20 (outdoor blow : 15)
	Connection method		Flare				
Connection wiring	Power wiring	mm^2	3 core x1.5	3 core x2.5	3 core x2.5	5 core x2.5	5 core x2.5
	Signal wiring	mm^2	4core x0.75	4core x0.75	4core x0.75	4core x0.75	4core x0.75
Refrigerant charge(R410a)		kg	1.4	1.68	2.1	3	3.5
Throttle Type			EEV	EEV	EEV	EEV	EEV
Ambient temp		℃	Cooling -15 ~ 48				
			Heating -10 ~ 24				

3.OUTLINES AND DIMENSIONS

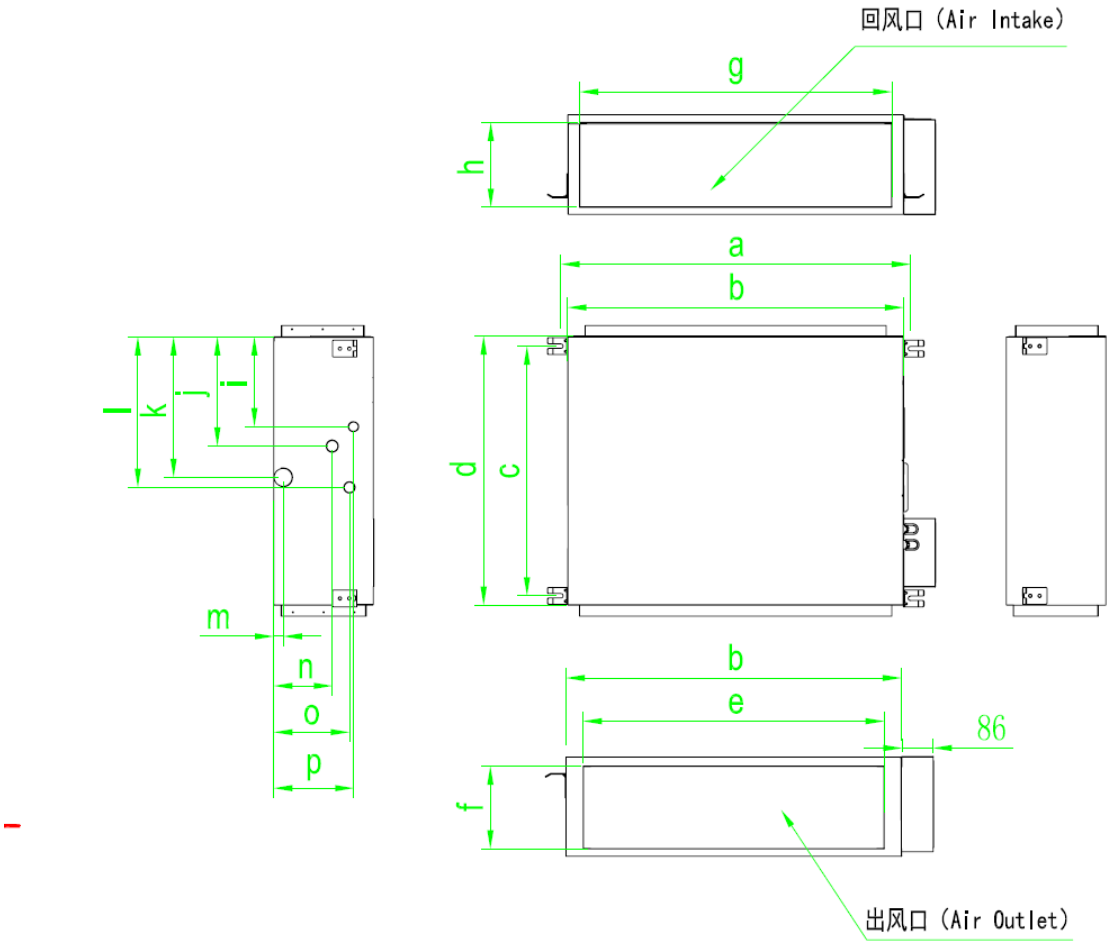
3-1 INDOOR

Duct type



	a	b	c	d	e	f	g	h	i	j	k	l	m	n
18K	1207	1170	154	447	971	117	1039	170	117	150	199	13	81	84

3. OUTLINES AND DIMENSION

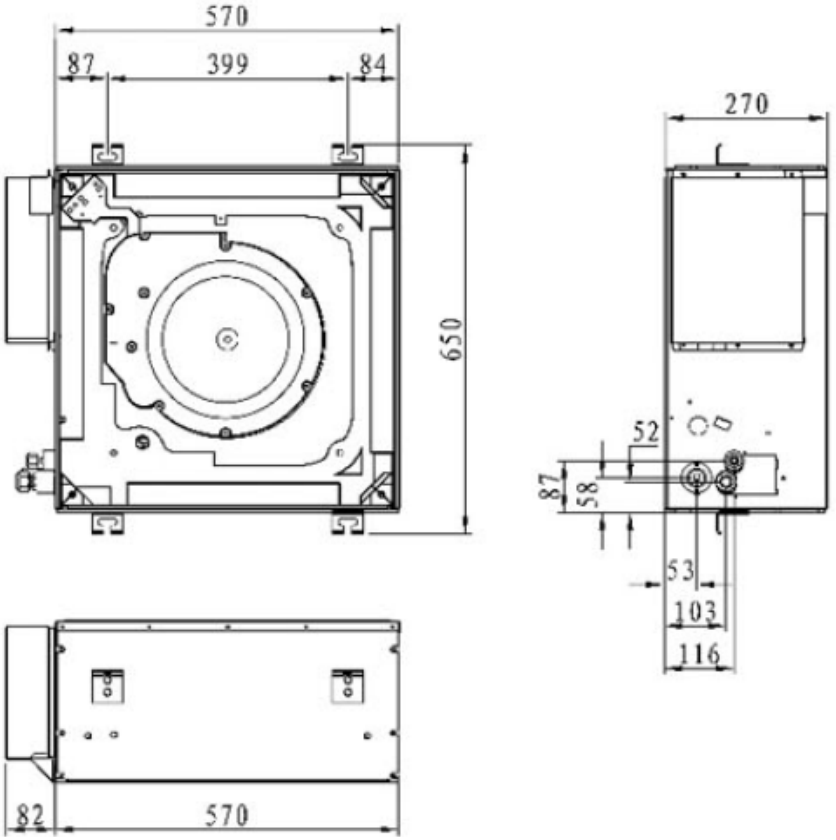


	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
24k	934	900	669	720	805	222	835	228	242	294	378	405	25	156	202	214
36k	1334	1295	669	720	1205	222	1235	228	242	294	378	405	25	156	202	214
48k 60k	1334	1295	740	796	1205	222	1235	308	237	312	375	405	25	204	203	242

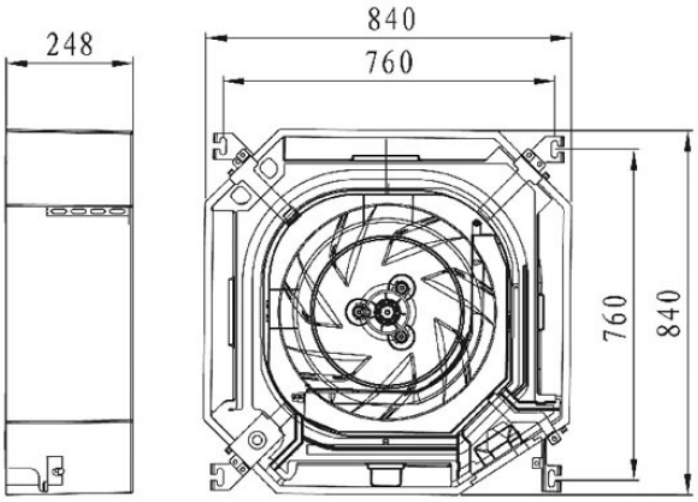
3. OUTLINES AND DIMENSION

Cassette type

18K

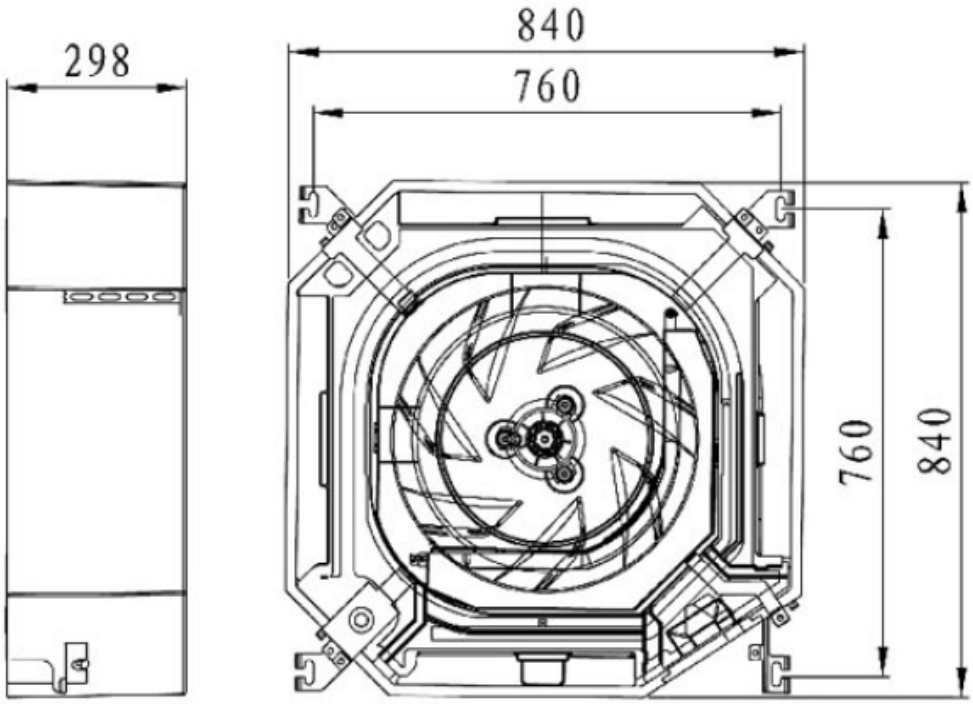


24K,36K



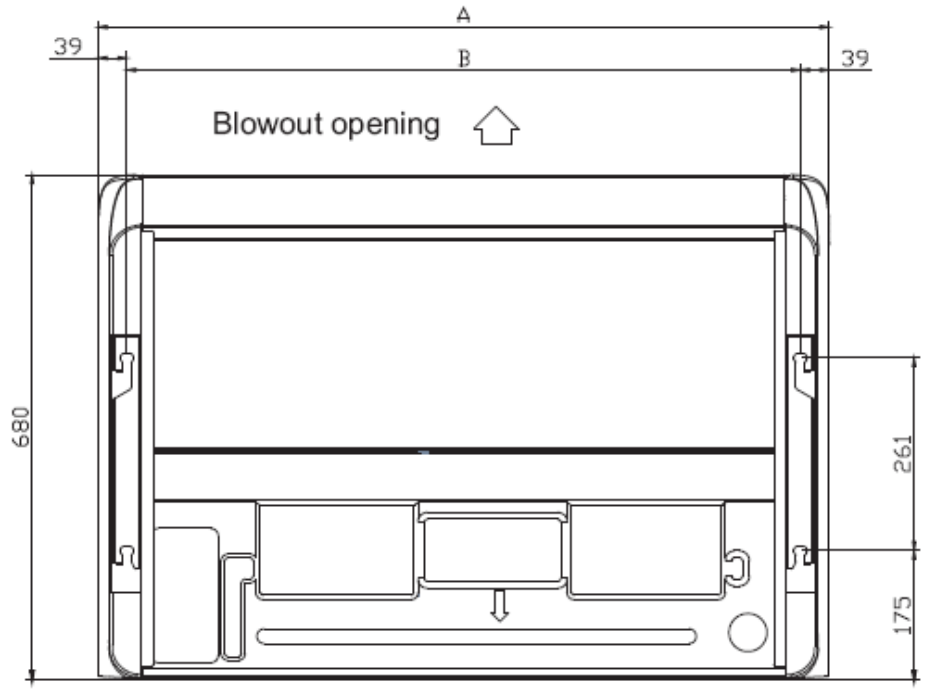
3. OUTLINES AND DIMENSION

48K,60K



3. OUTLINES AND DIMENSION

Ceiling&Floor Type



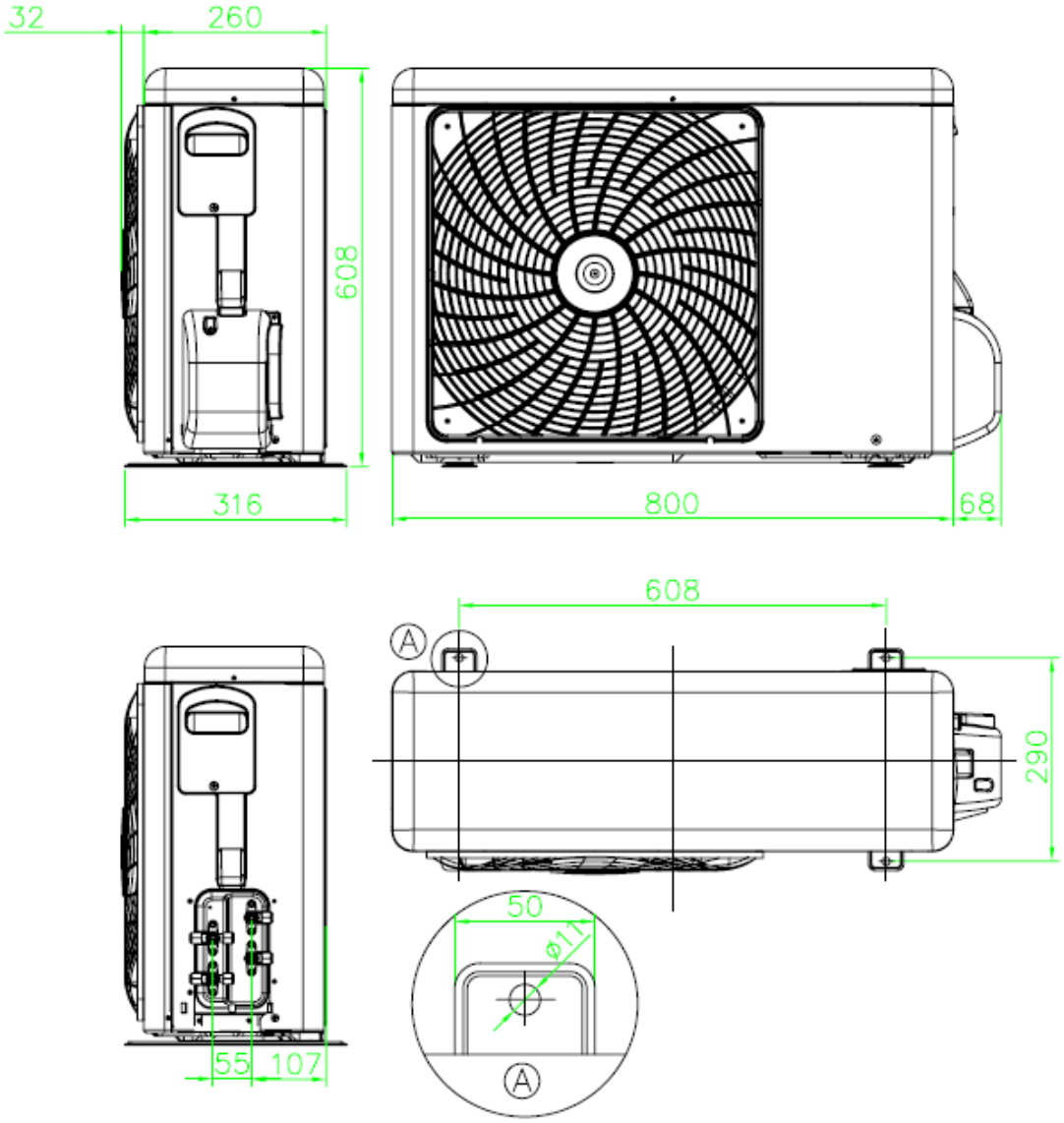
(Unit:mm)

TYPE	A	B
18K, 24K	990	912
36K	1285	1207
48K, 60K	1580	1502

3. OUTLINES AND DIMENSION

3-2.OUTDOOR

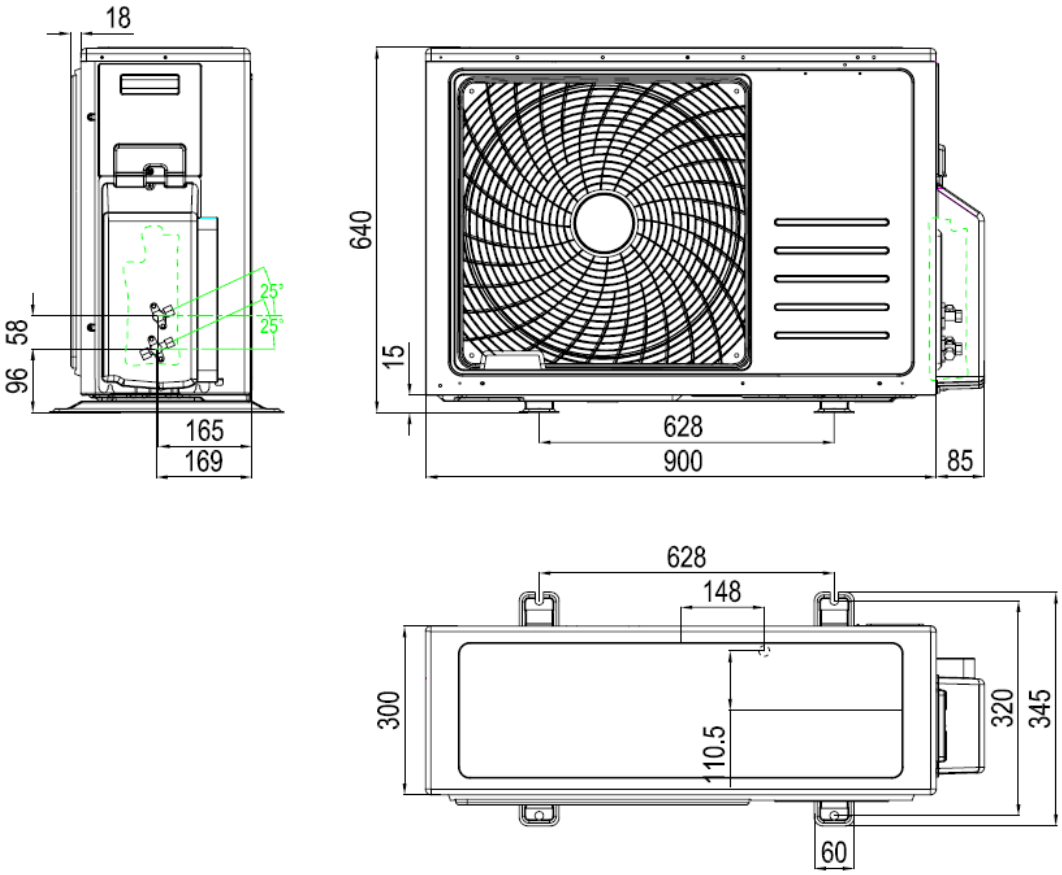
18K(AUW-18U4SG)



3. OUTLINES AND DIMENSION

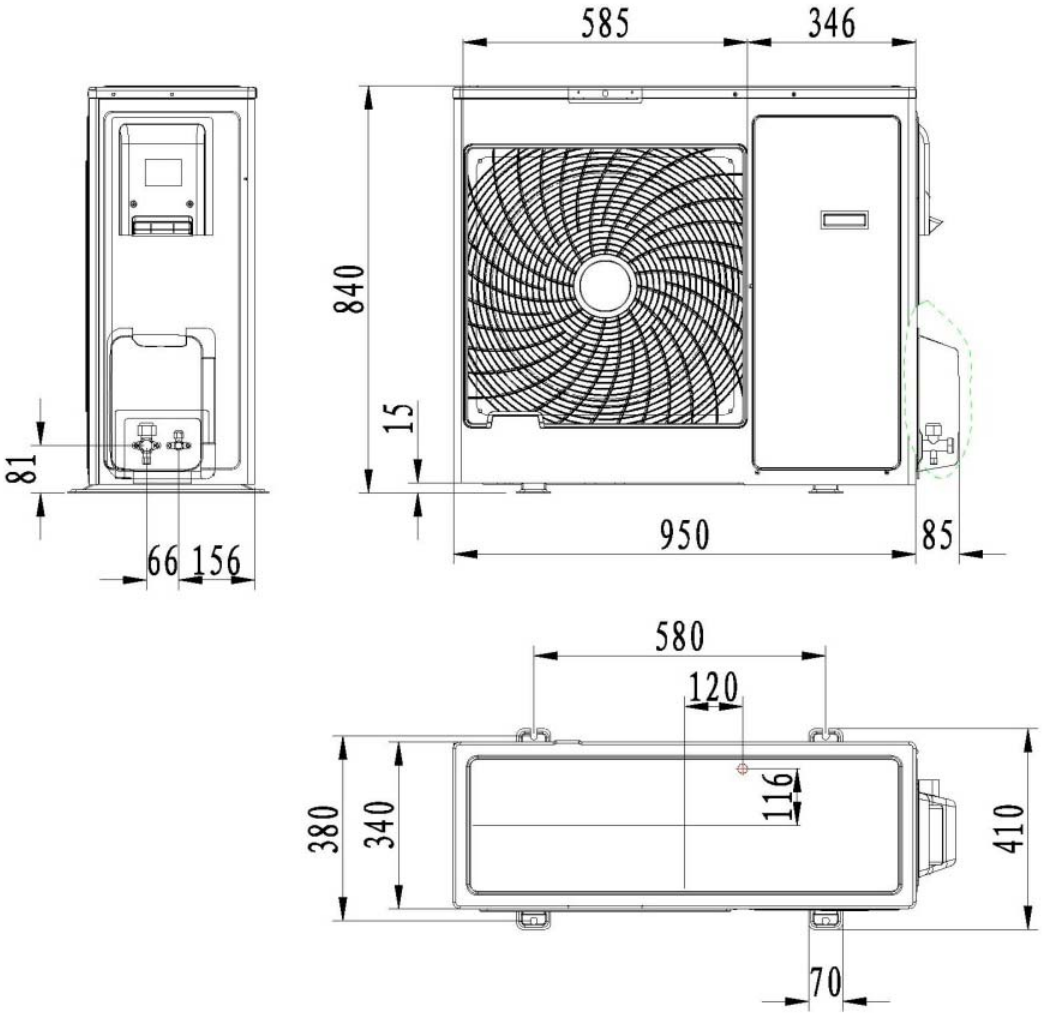
18K（MODEL: AUW-18U4SZ1）

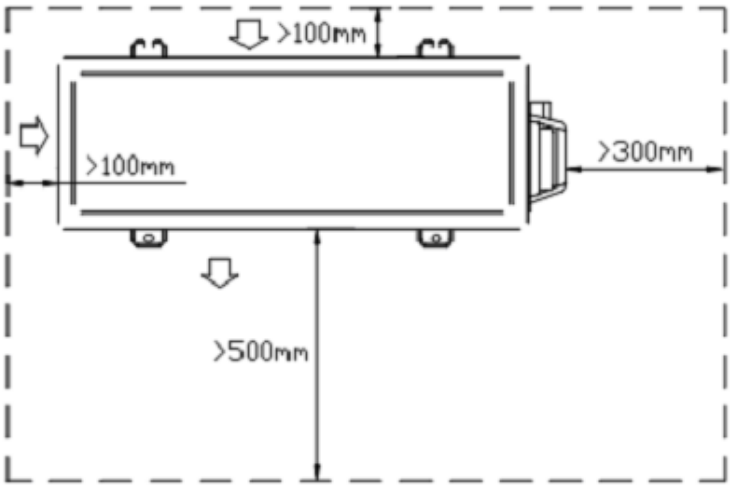
24K(MODEL: AUW-24U4SZ)



3. OUTLINES AND DIMENSION

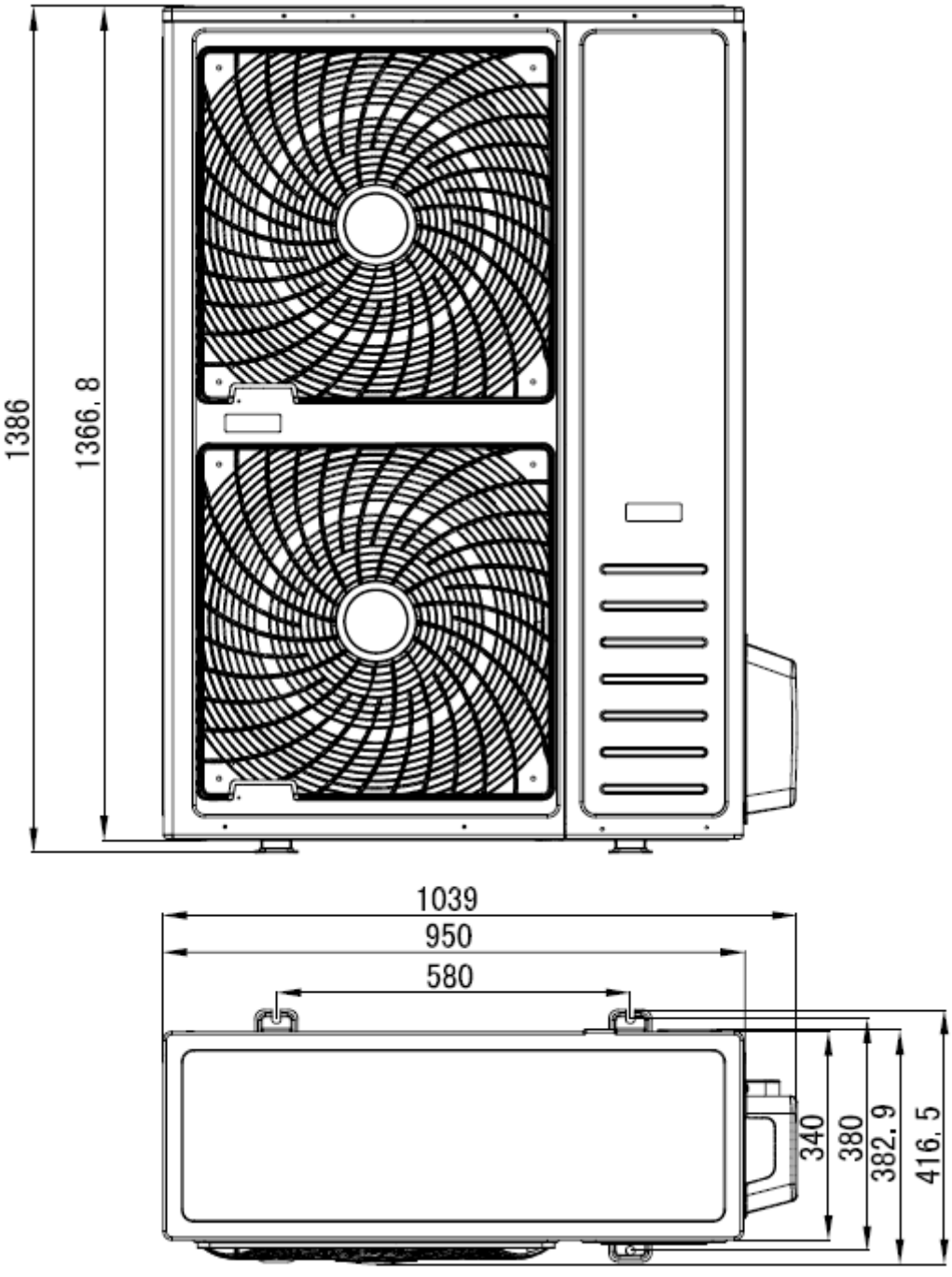
24&36K
（MODEL: AUW-24U4SA1, AUW-36U4SA1, AUW-36W4SA）





3. OUTLINES AND DIMENSION

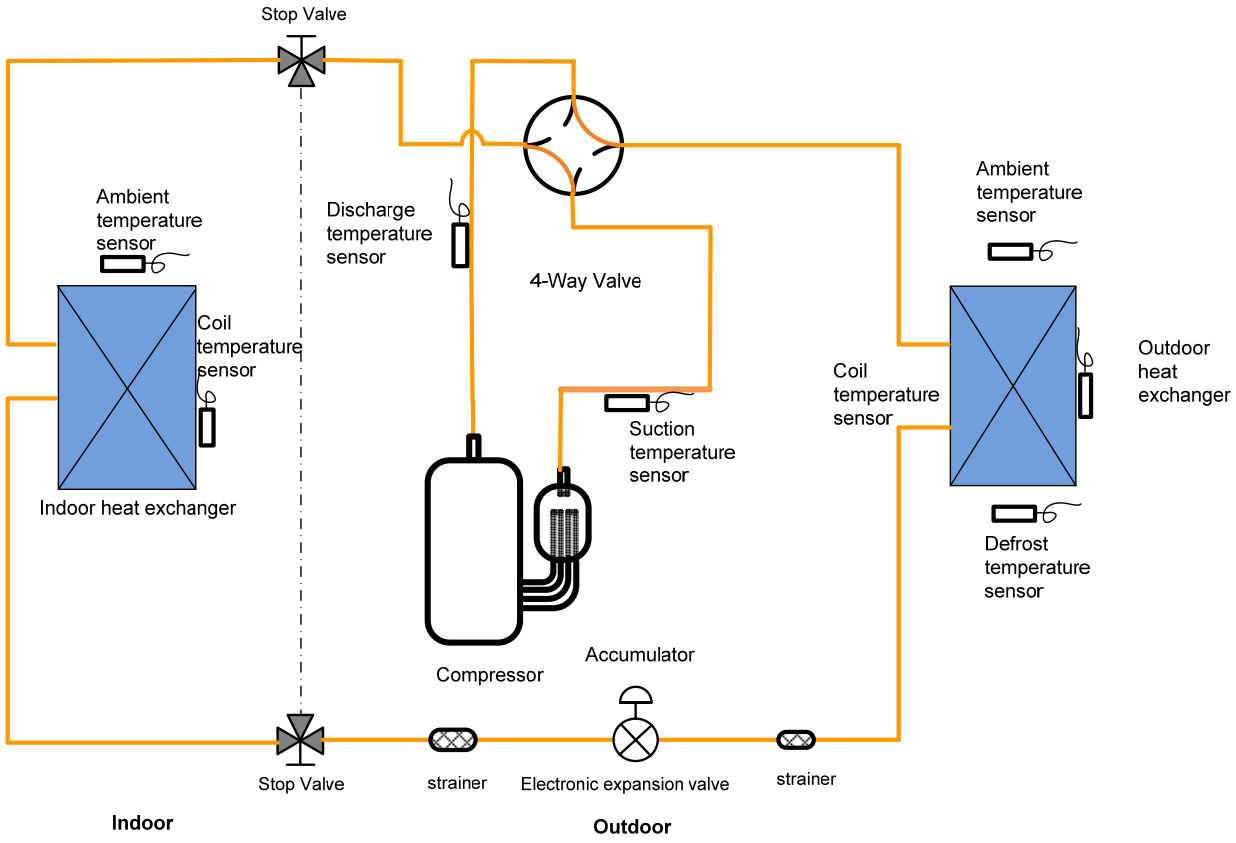
48K&60K
（MODEL: AUW-48U6SP、AUW-60U6SP）



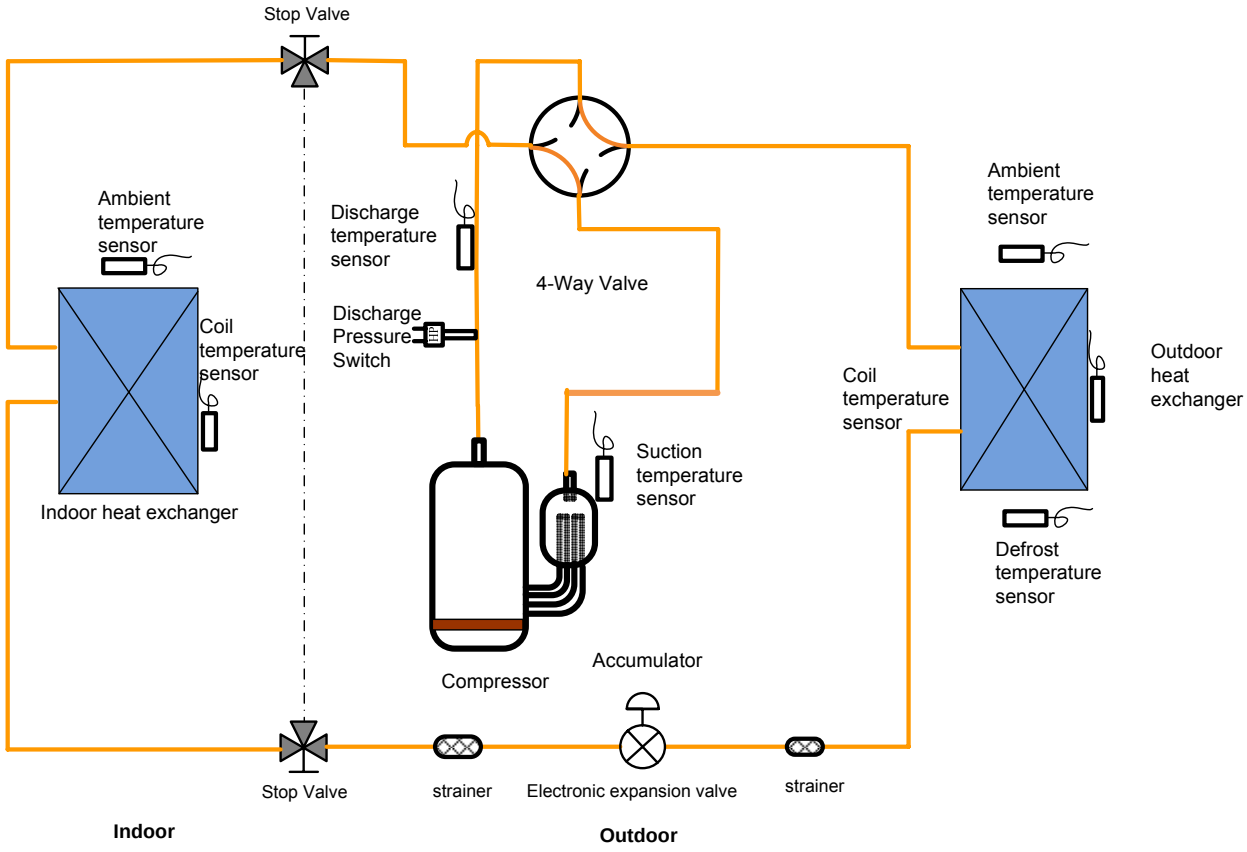
4. Diagrams&DATA

4.1 Piping Diagrams

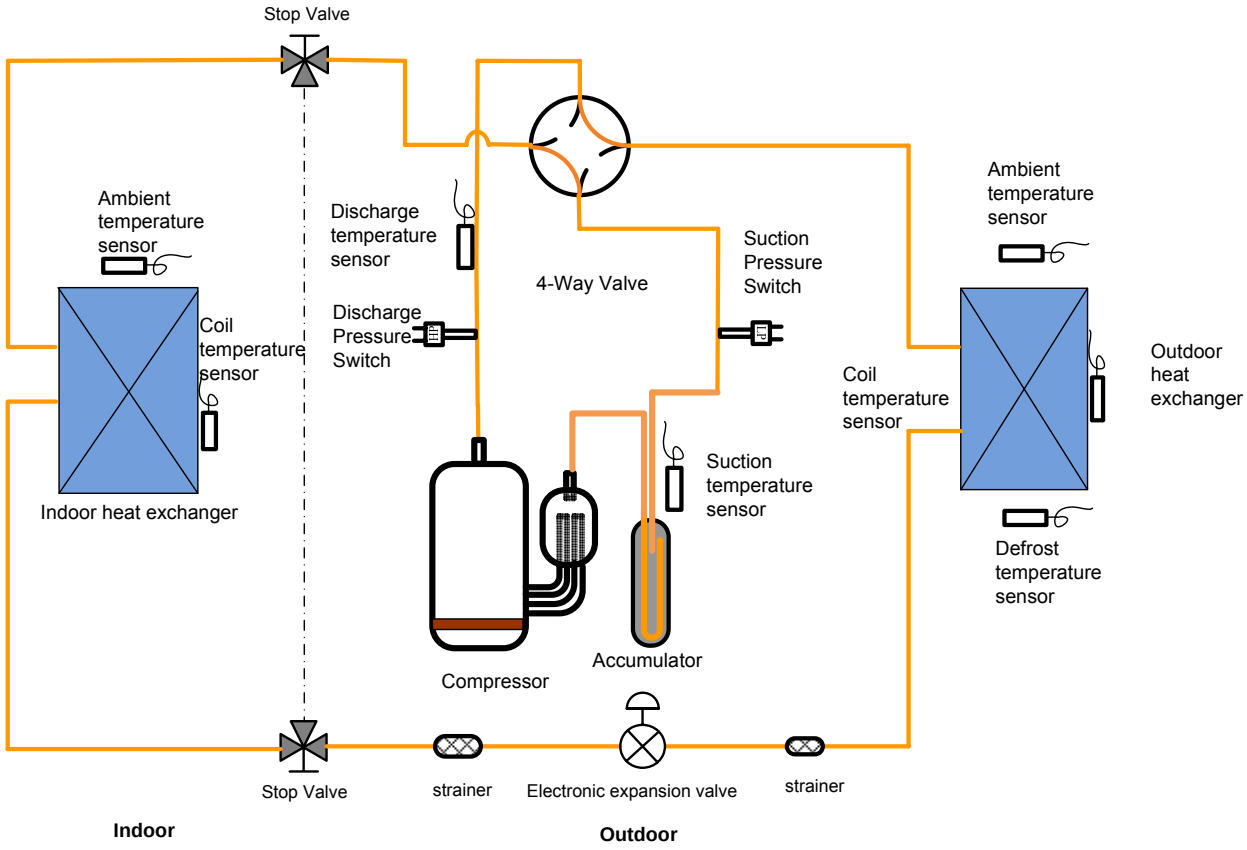
18k type



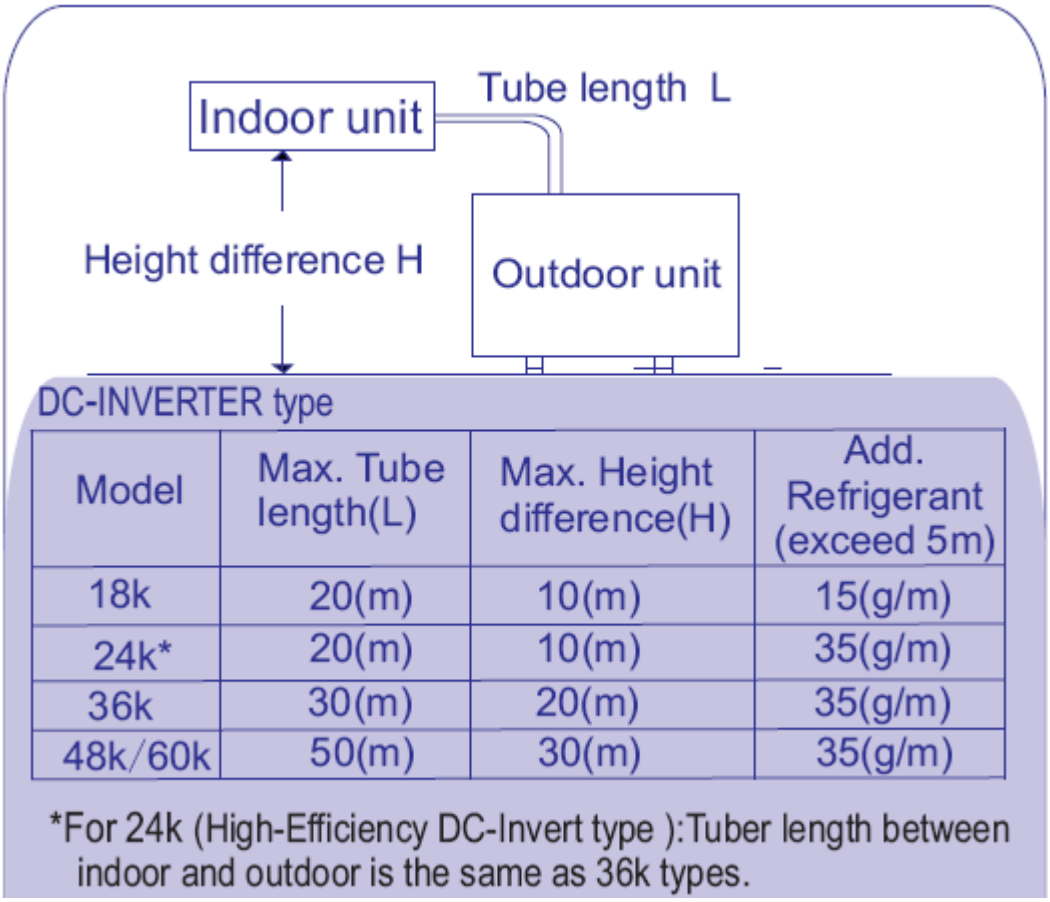
24k &36K type


Stop Valve
Ambient temperature sensor
Coil temperature sensor
Indoor heat exchanger
Discharge temperature sensor
Discharge Pressure Switch
4-Way Valve
Suction temperature sensor
Compressor
Accumulator
Stop Valve
strainer
Electronic expansion valve
strainer
Ambient temperature sensor
Coil temperature sensor
Outdoor heat exchanger
Defrost temperature sensor
Indoor
Outdoor

48K&60K


Stop Valve
Ambient temperature sensor
Discharge temperature sensor
4-Way Valve
Suction Pressure Switch
Ambient temperature sensor
Coil temperature sensor
Discharge Pressure Switch
Coil temperature sensor
Outdoor heat exchanger
Indoor heat exchanger
Suction temperature sensor
Defrost temperature sensor
Accumulator
Compressor
Stop Valve
strainer
Electronic expansion valve
strainer
Indoor
Outdoor

4-2MAX. Refrigerant pipe length and height difference



DC-INVERTER type

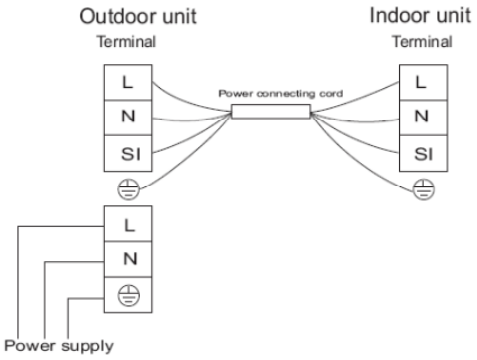
Model	Max. Tube length(L)	Max. Height difference(H)	Add. Refrigerant (exceed 5m)
18k	20(m)	10(m)	15(g/m)
24k*	20(m)	10(m)	35(g/m)
36k	30(m)	20(m)	35(g/m)
48k/60k	50(m)	30(m)	35(g/m)

*For 24k (High-Efficiency DC-Invert type):Tuber length between indoor and outdoor is the same as 36k types.

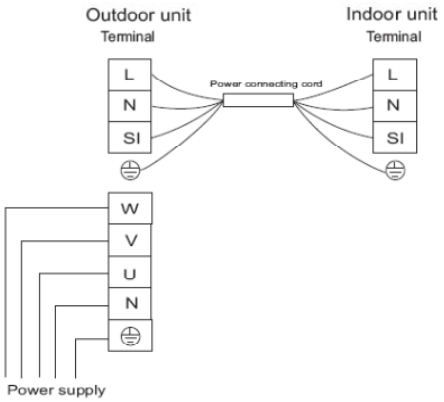
*Do your best to reduce the pipe length. Long pipe may cause capacity of the indoor unit incline.

Outdoor unit precharged		Total refrigerant pipe length	
		0m~5m	5m～60m
AUW-18U4SG	1270g	0g	Xg = 15g / m × (Total pipe length(m) -5)
AUW-24U4SZ	1500g	0g	
AUW-36U4SA	2100g	0g	
AUW-18U4SZ1	1400g	0g	
AUW-24U4SA1	1680g	0g	Xg =35g / m × (Total pipe length(m) -5)
AUW-36U4SA1	2100g	0g	
AUW-48U6SP	3000g	0g	
AUW-60U6SP	3500g	0g	

4-3ELECTRIC Diagrams



18K/24K/36K



48K/60K

Recommend Wire Size

Model	POWER SUPPLY	Power Source Cable Size (mm2)	Transmitting Cable Size (mm2)
18K	220-240V,50Hz	3×1.5	4×0.75
24K/36K	220-240V,50Hz	3×2.5	4×0.75
48K/60K	380~415V,3N~,50Hz	5×2.5	4×0.75

● Use an ELB (Electric Leakage Breaker). If not used, it will cause an electric shock or a fire.

● Do not operate the system until all the check points have been cleared.

(A) Check to ensure that the insulution resistance is more than 1 megohm, by measuring the resistance between ground and the terminal of the electrical parts. If not, do not operate the system until the electrical leakage is found and repaired.

(B) Check to ensure that the stop valves of the outdoor unit are fully opened and then start the system.

● Pay attention to the following items while the system is running.

(A) Do not touch any of the parts by hand at the discharge gas side, since the compressor chamber and the pipes at the discharge side are heated higher than 90℃.

(B) DO NOT PUSH THE BUTTON OF THE MAGNETIC SWITCH(ES). It will cause a serious Accident.

NOTES:

1) Follow local codes and regulations when selecting field wires.

2) The wire sizes marked in the table are selected at the maxim current of the unit according to the European Standard ,En60 335-1. Use the wires which are not lighter than the ordinary tough rubber sheathed flexible cord (code designation H07RN-F) or ordinary polychloroprene sheathed flexible cord (code designation H07RN-F) .

3) Use a shielded cable for the transmitting circuit and connect it to ground .

4) In the case that power cables are connected in series, add each unit maximum current and select wires below.

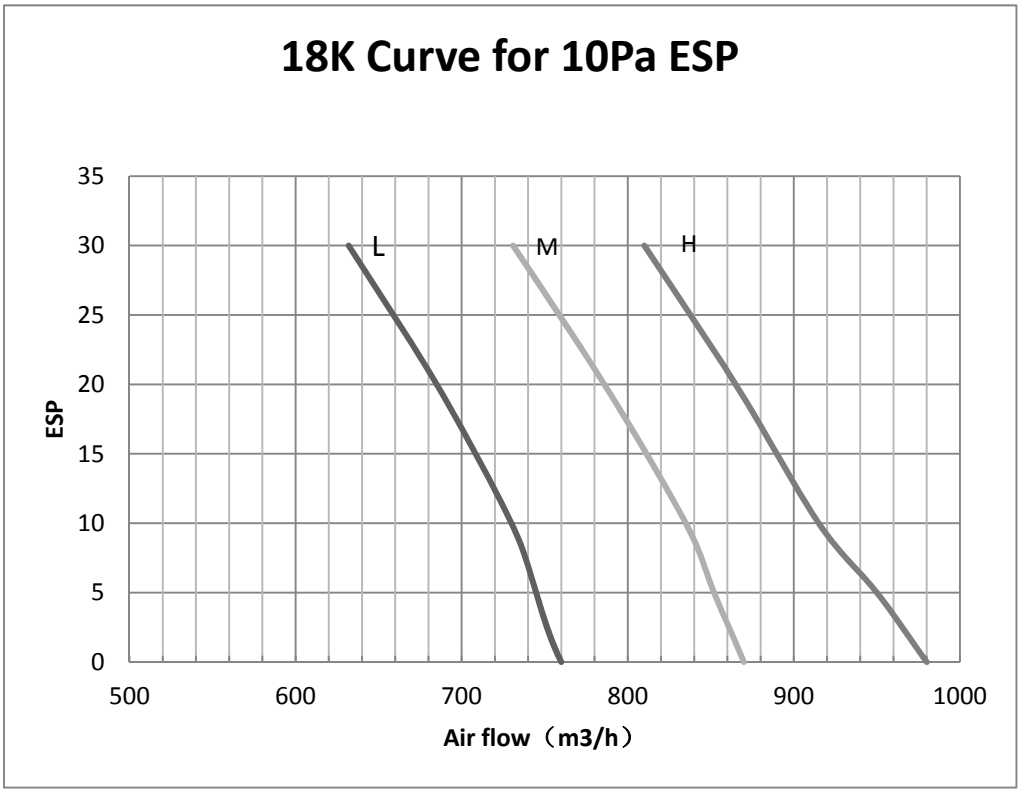
Selection According to EN60 335-1

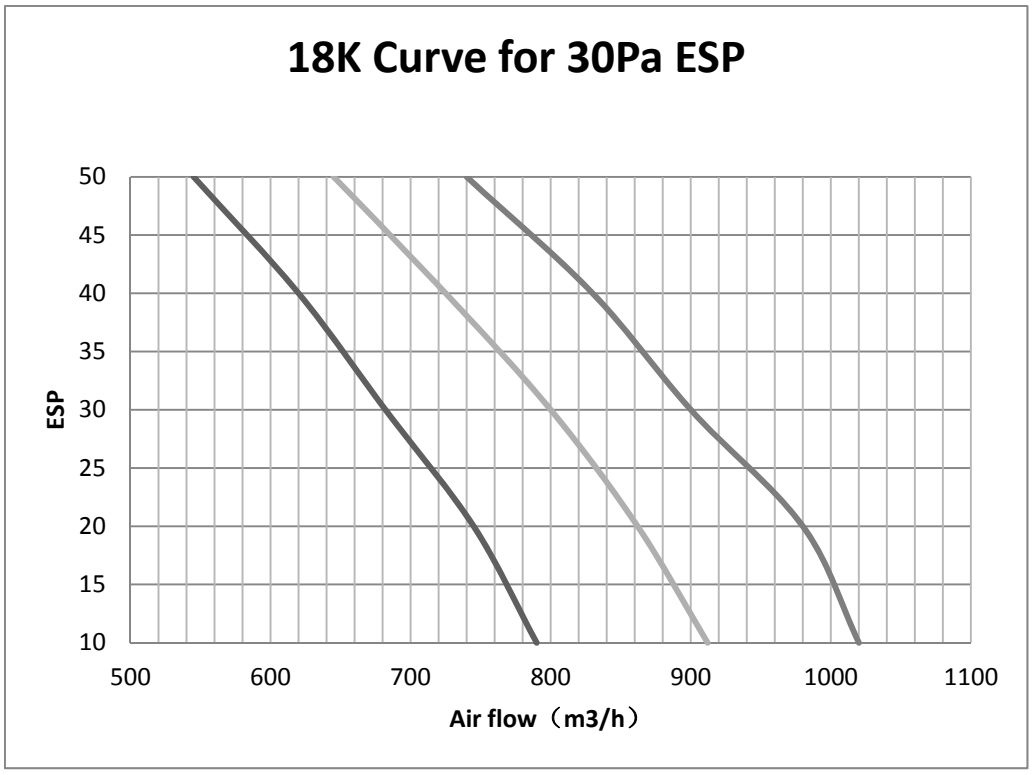
Current i (A)	Wire Size (mm^2)
$i \leq 6$	0.75
$6 < i \leq 10$	1
$10 < i \leq 16$	1.5
$16 < i \leq 25$	2.5
$25 < i \leq 32$	4
$32 < i \leq 40$	6
$40 < i \leq 63$	10
$63 < i$	*3

* in the case that current exceeds 63A, do not connect cables in series.

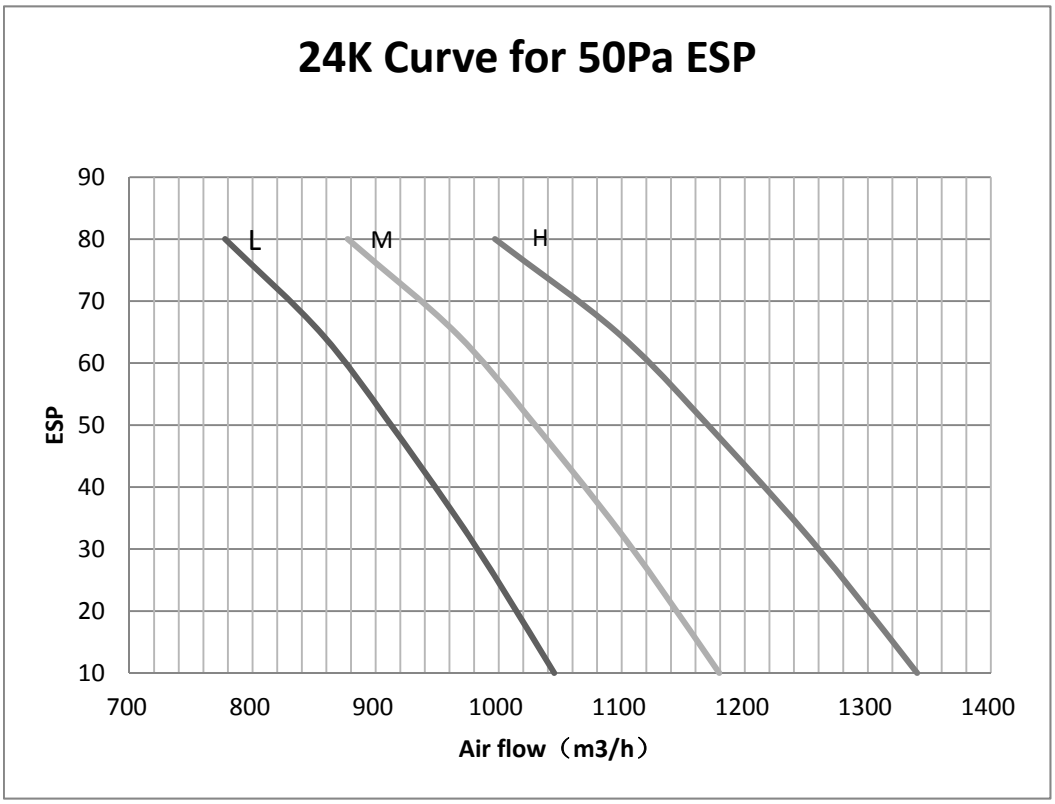
4-4Air flow and ESP Chart Diagrams(for duct type)

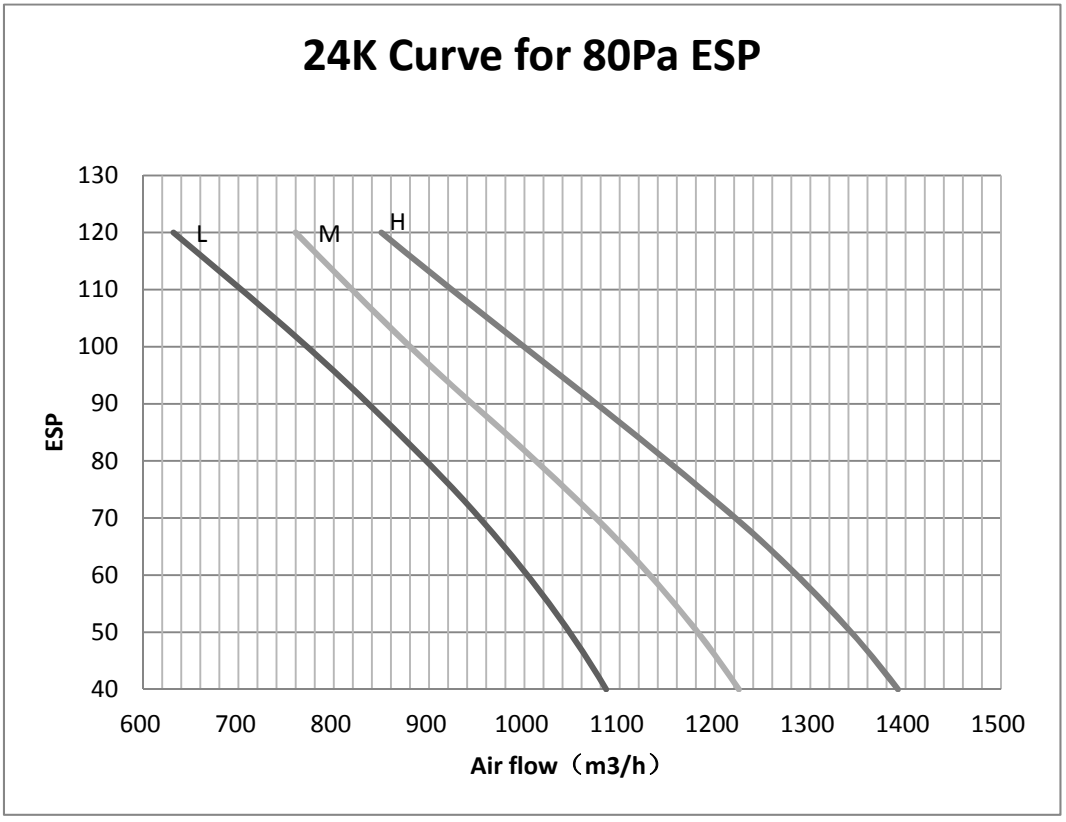
18K



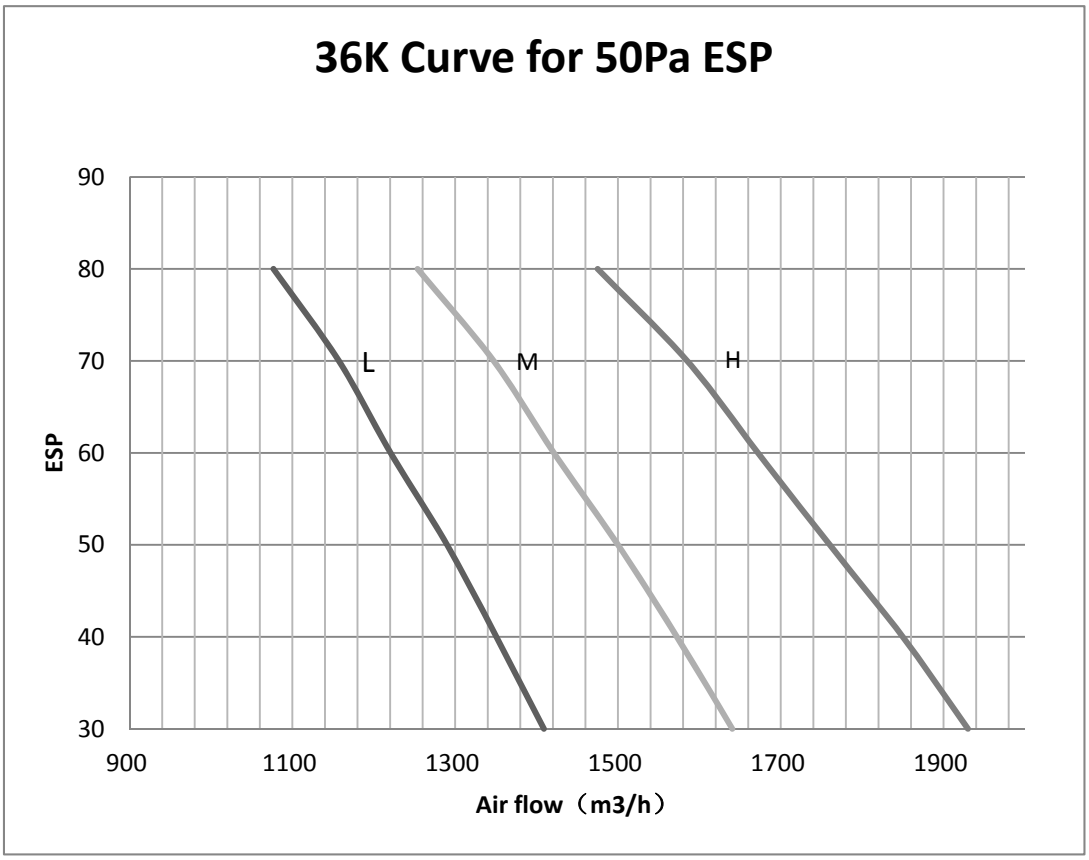


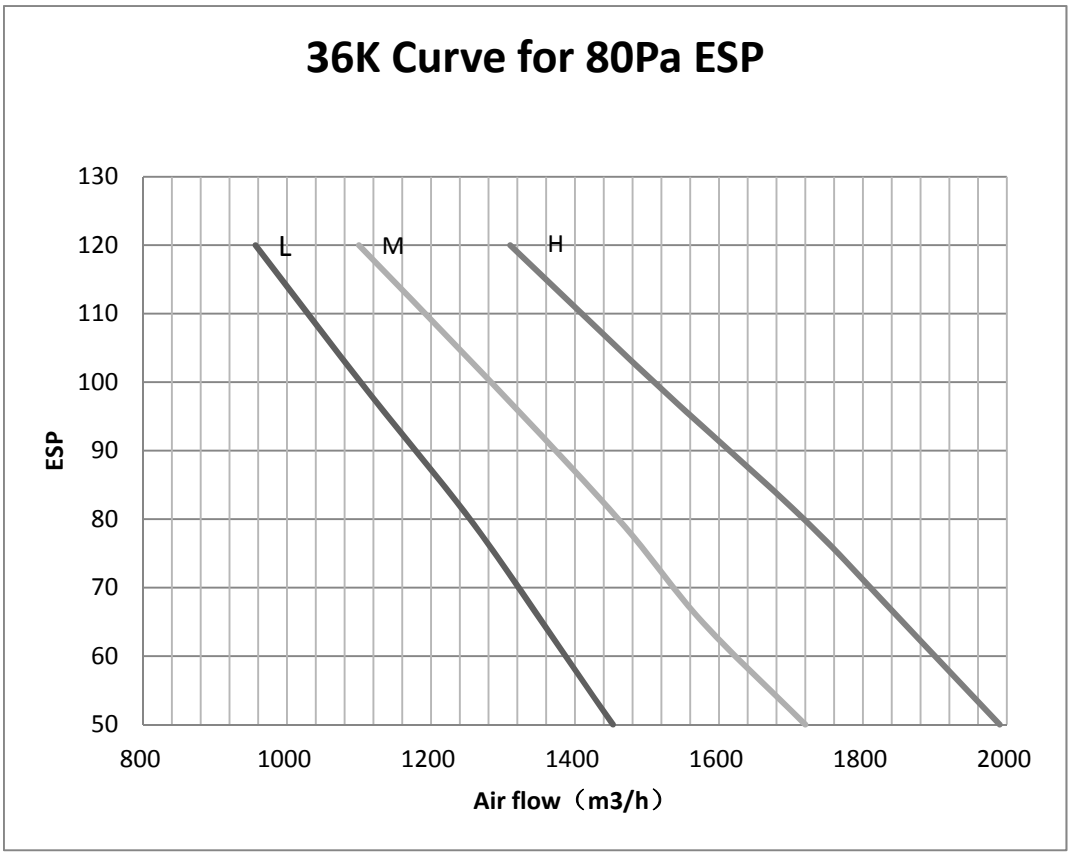
24K


24K Curve for 50Pa ESP
90
80
70
60
50
40
30
20
10
ESP
L
M
H
700
800
900
1000
1100
1200
1300
1400
Air flow（m3/h）

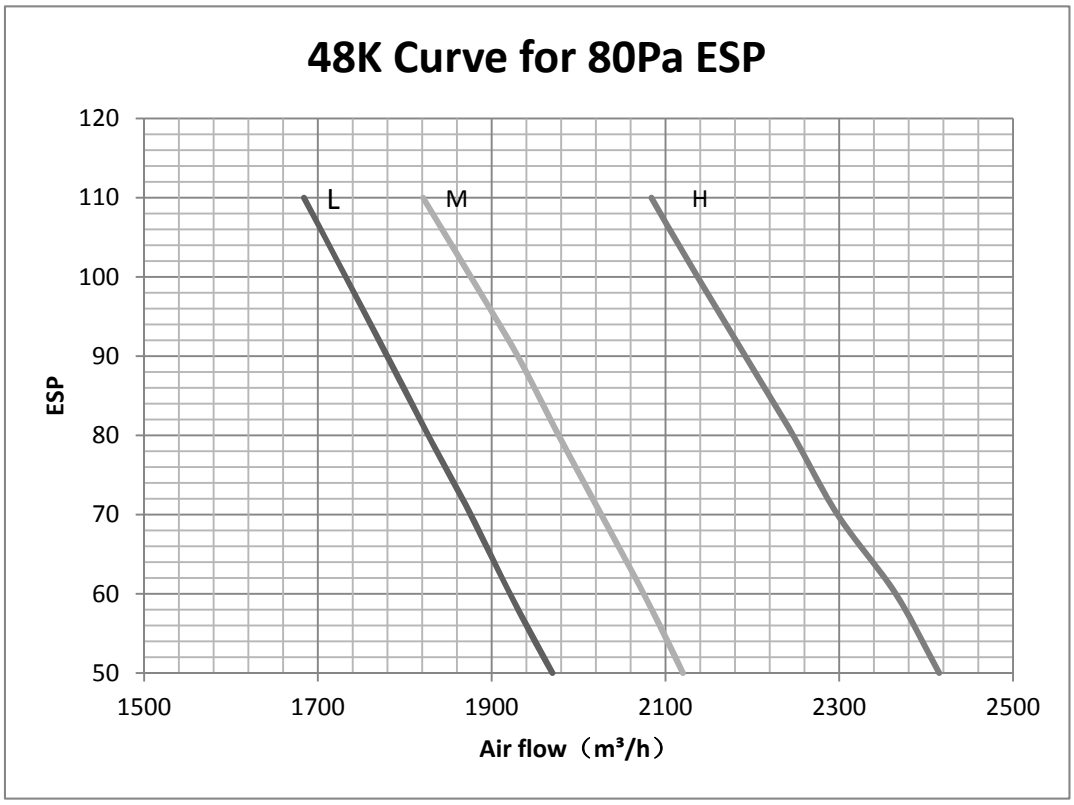

24K Curve for 80Pa ESP
130
120
110
100
90
80
70
60
50
40
ESP
L
M
H
600
700
800
900
1000
1100
1200
1300
1400
1500
Air flow（m3/h）

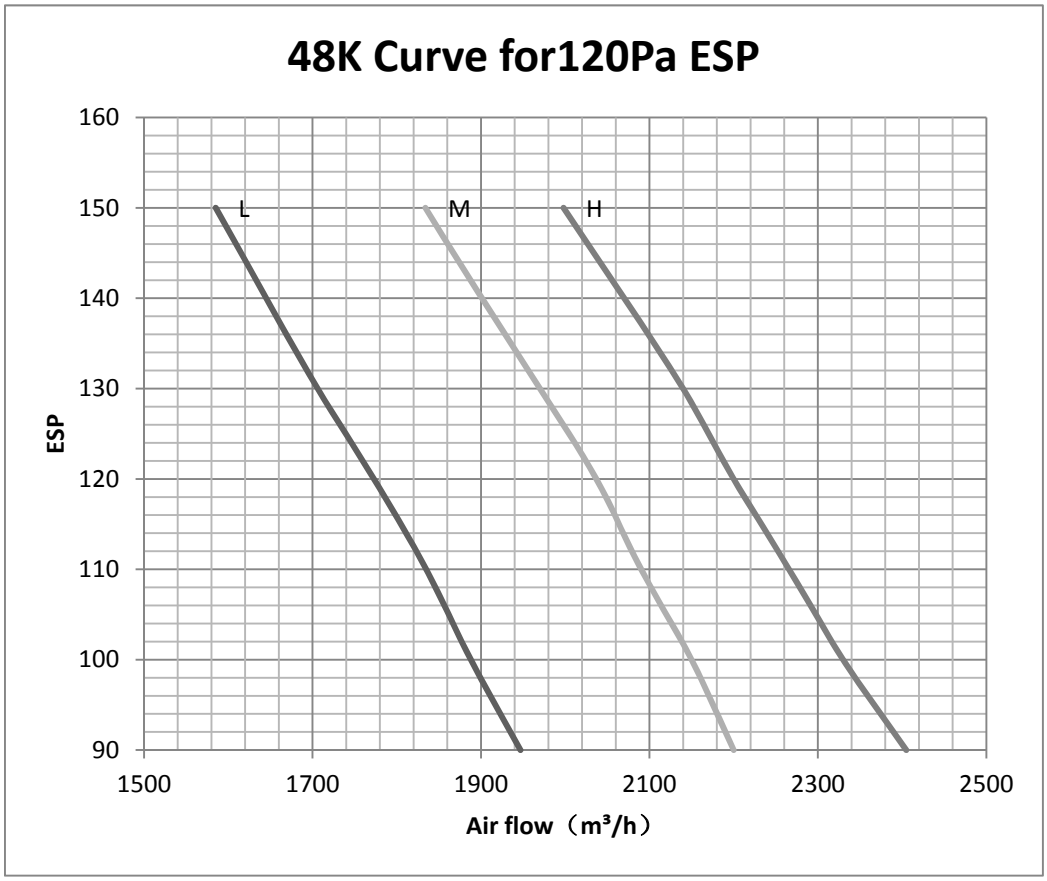
36K (AC MOTOR)


36K Curve for 50Pa ESP
90
80
70
60
50
40
30
ESP
L
M
H
900
1100
1300
1500
1700
1900
Air flow（m3/h）

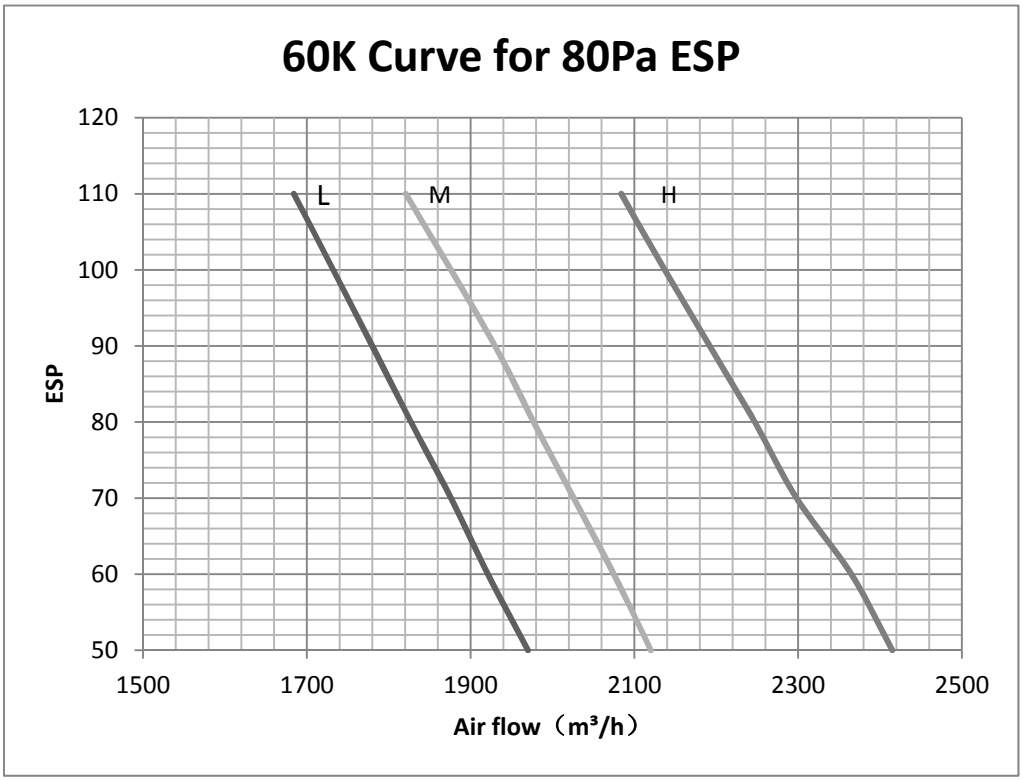

36K Curve for 80Pa ESP
130
120
110
100
90
80
70
60
50
ESP
L
M
H
800
1000
1200
1400
1600
1800
2000
Air flow（m3/h）

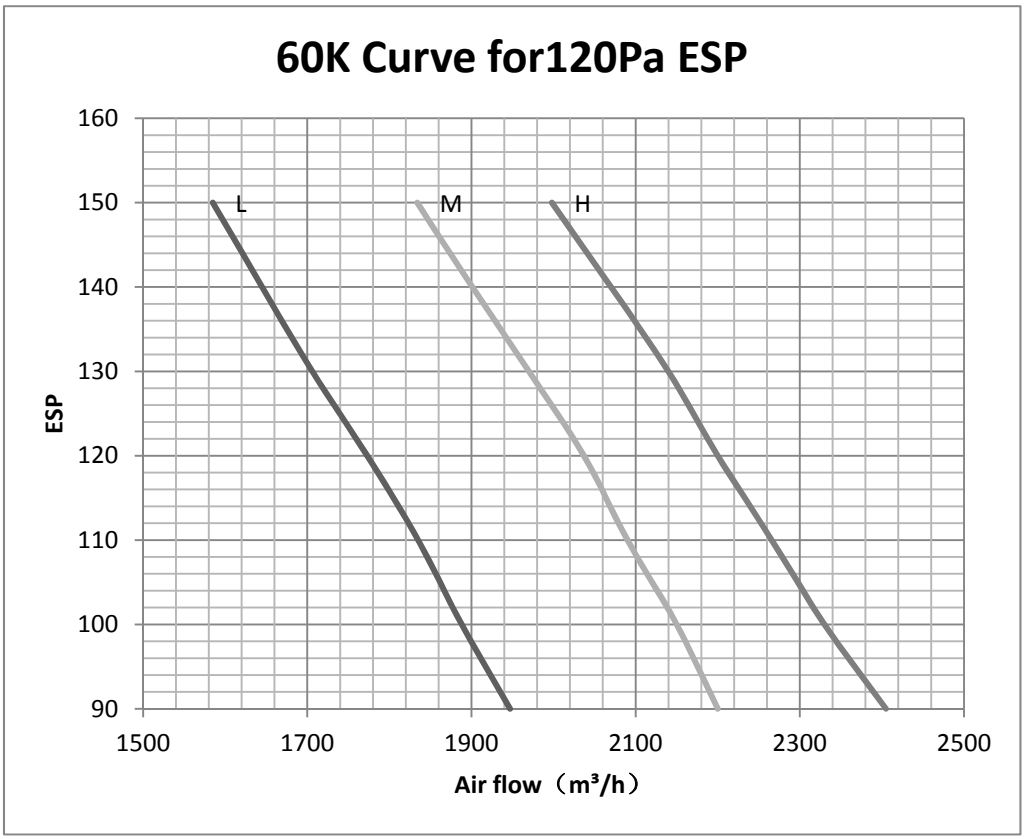
48K


48K Curve for 80Pa ESP
120
110
100
90
80
70
60
50
ESP
L
M
H
1500
1700
1900
2100
2300
2500
Air flow（m³/h）


48K Curve for120Pa ESP
160
150
140
130
120
110
100
90
ESP
L
M
H
1500
1700
1900
2100
2300
2500
Air flow（m³/h）

60K


60K Curve for 80Pa ESP
120
110
100
90
80
70
60
50
ESP
L
M
H
1500
1700
1900
2100
2300
2500
Air flow（m³/h）


60K Curve for120Pa ESP
160
150
140
130
120
110
100
90
ESP
L
M
H
1500
1700
1900
2100
2300
2500
Air flow（m³/h）

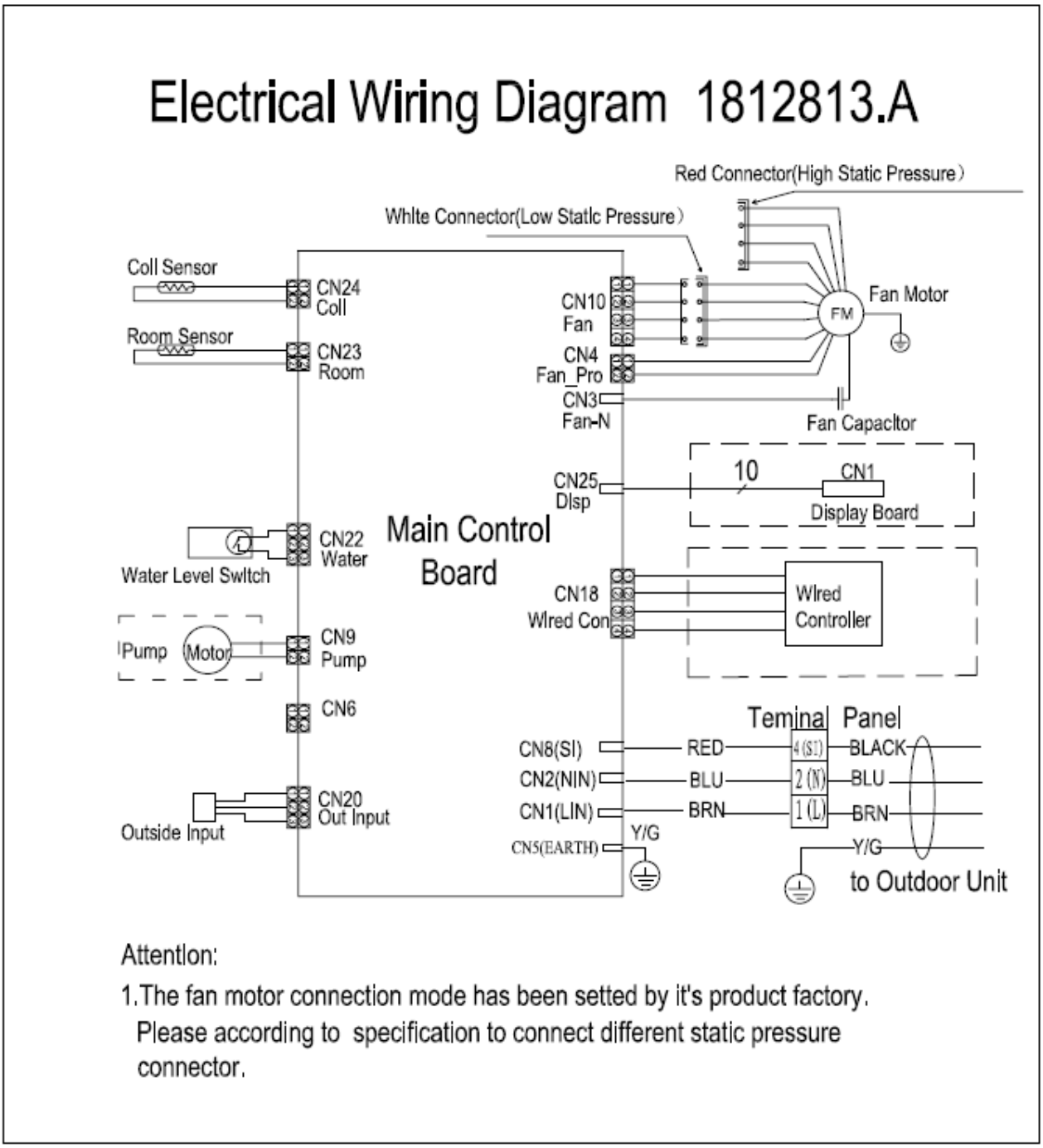
5. ELECTRICAL DATA

5-1.Electrical wiring diagrams

INDOOR UNIT

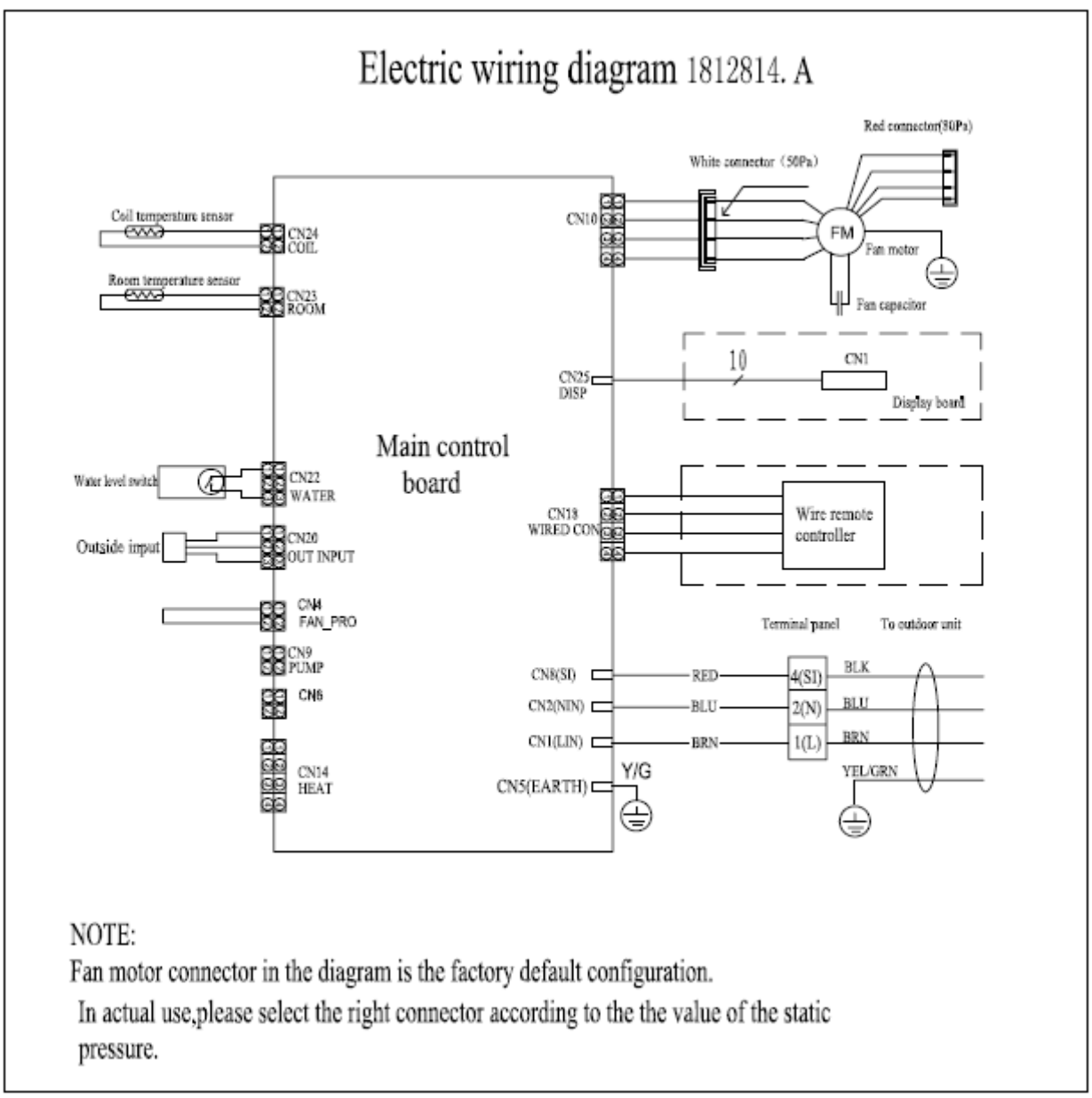
Duct type

AUD-18UX4SKL,AUD-18UX4SKL1



5. ELECTRICAL DATA

AUD-24UX4SLH,AUD-36UX4SMH



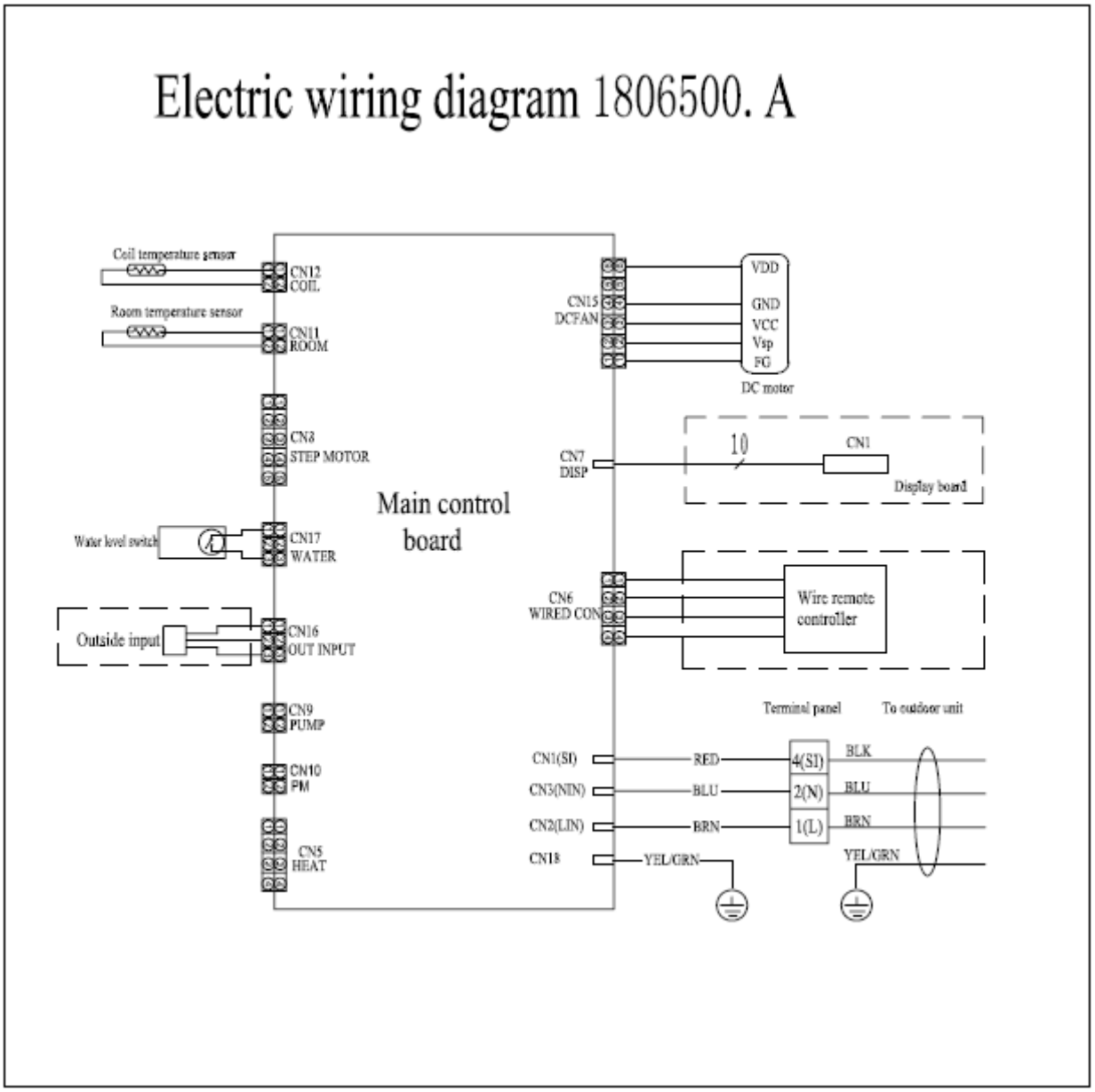
NOTE:

Fan motor connector in the diagram is the factory default configuration.

In actual use,please select the right connector according to the the value of the static pressure.

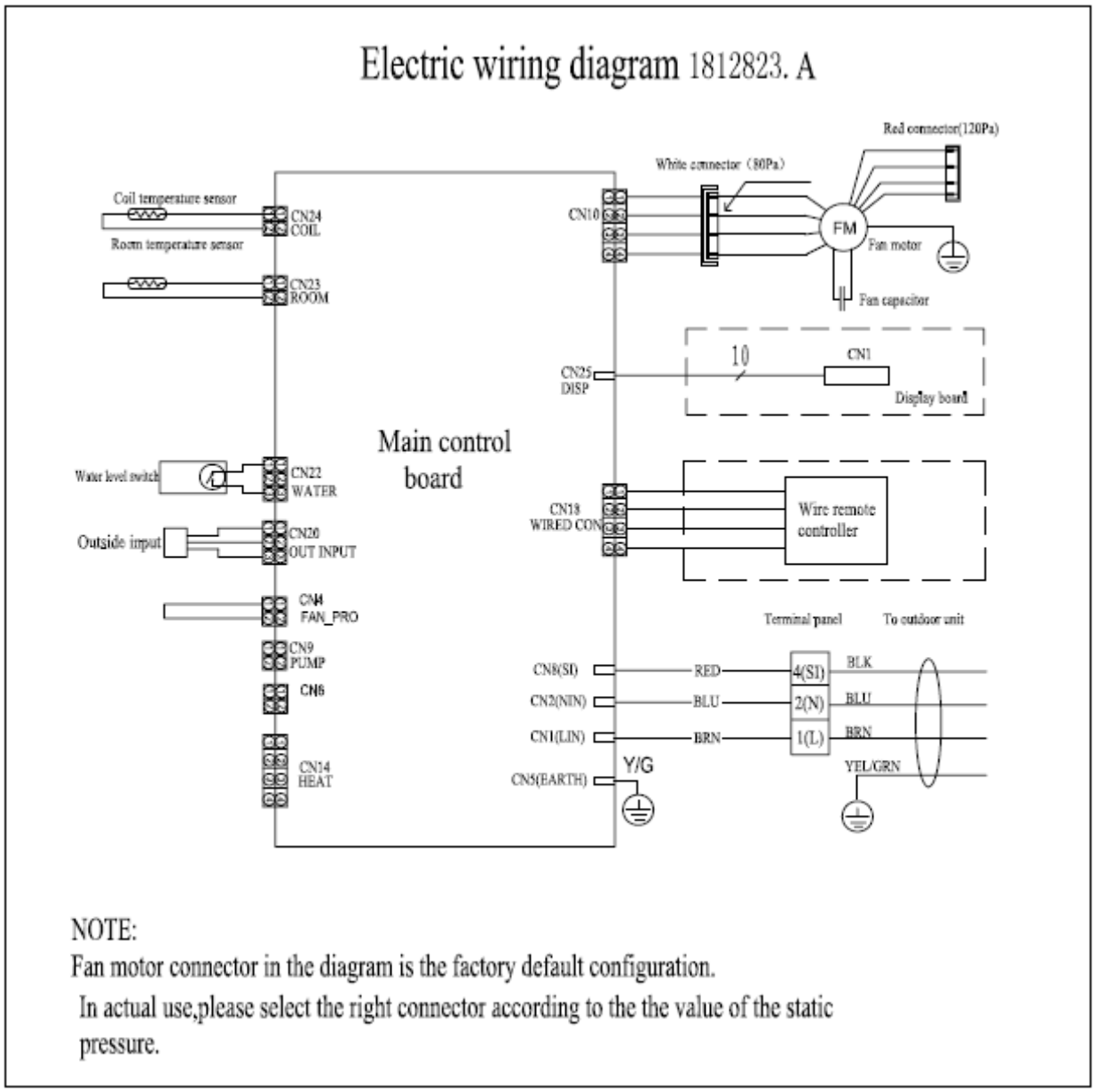
5. ELECTRICAL DATA

AUD-24U4SLH1,AUD-36U4SMH1



5. ELECTRICAL DATA

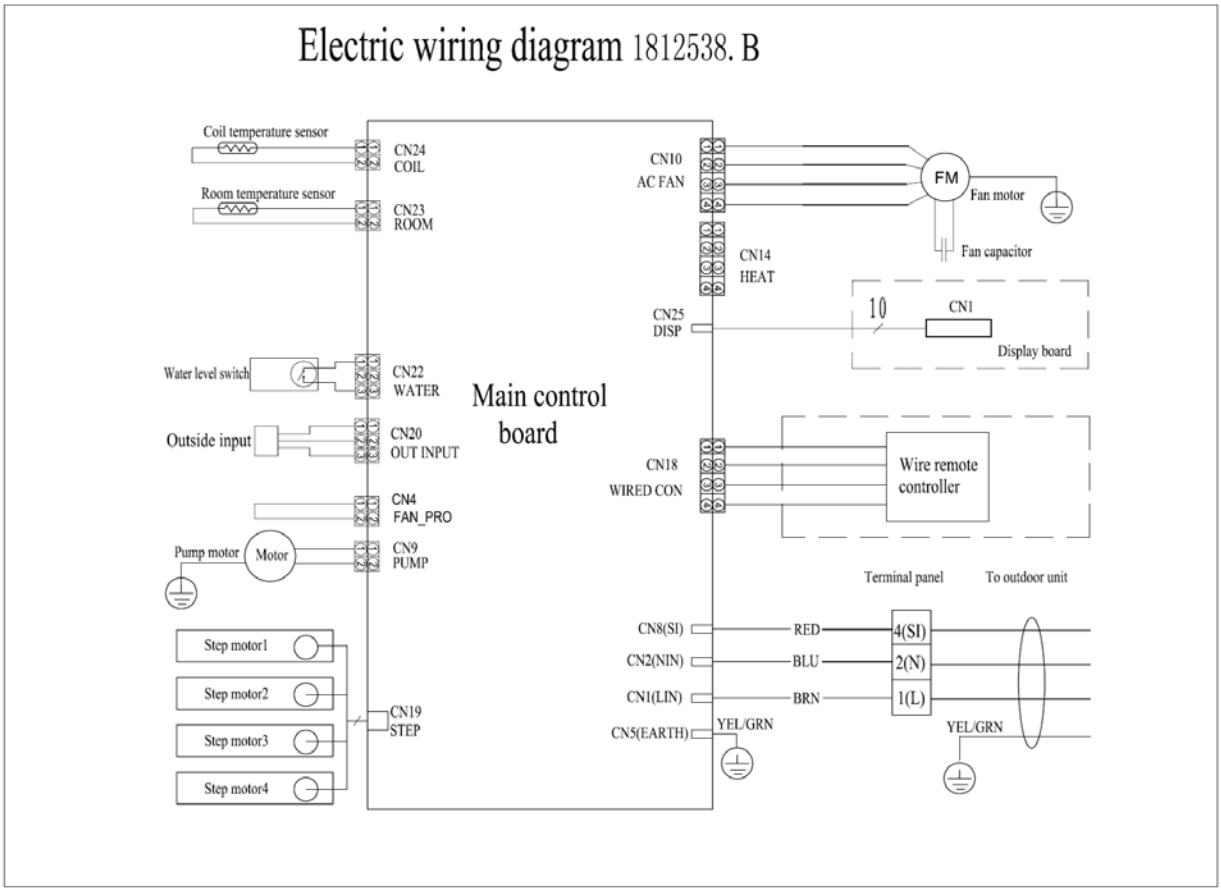
AUD-48UX4SHH,AUD-60UX4SHH



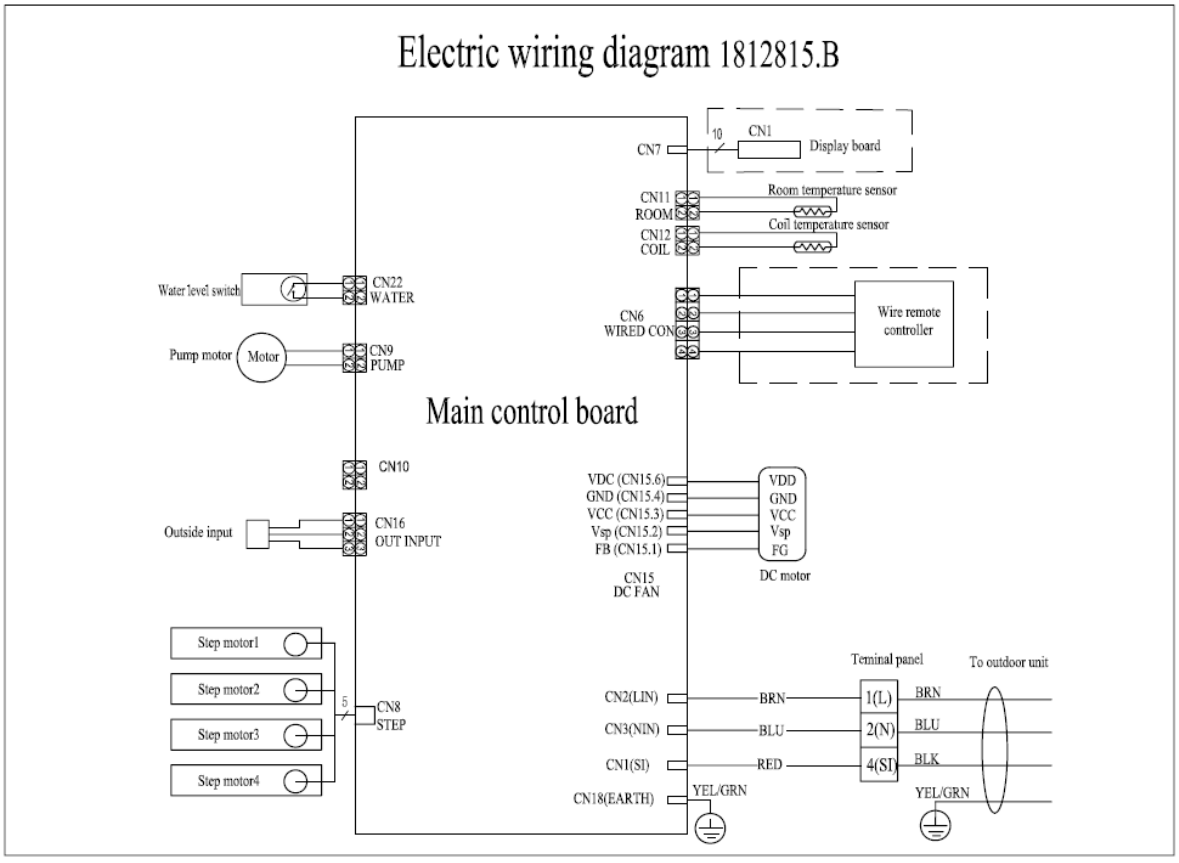
5. ELECTRICAL DATA

Cassette type

18k



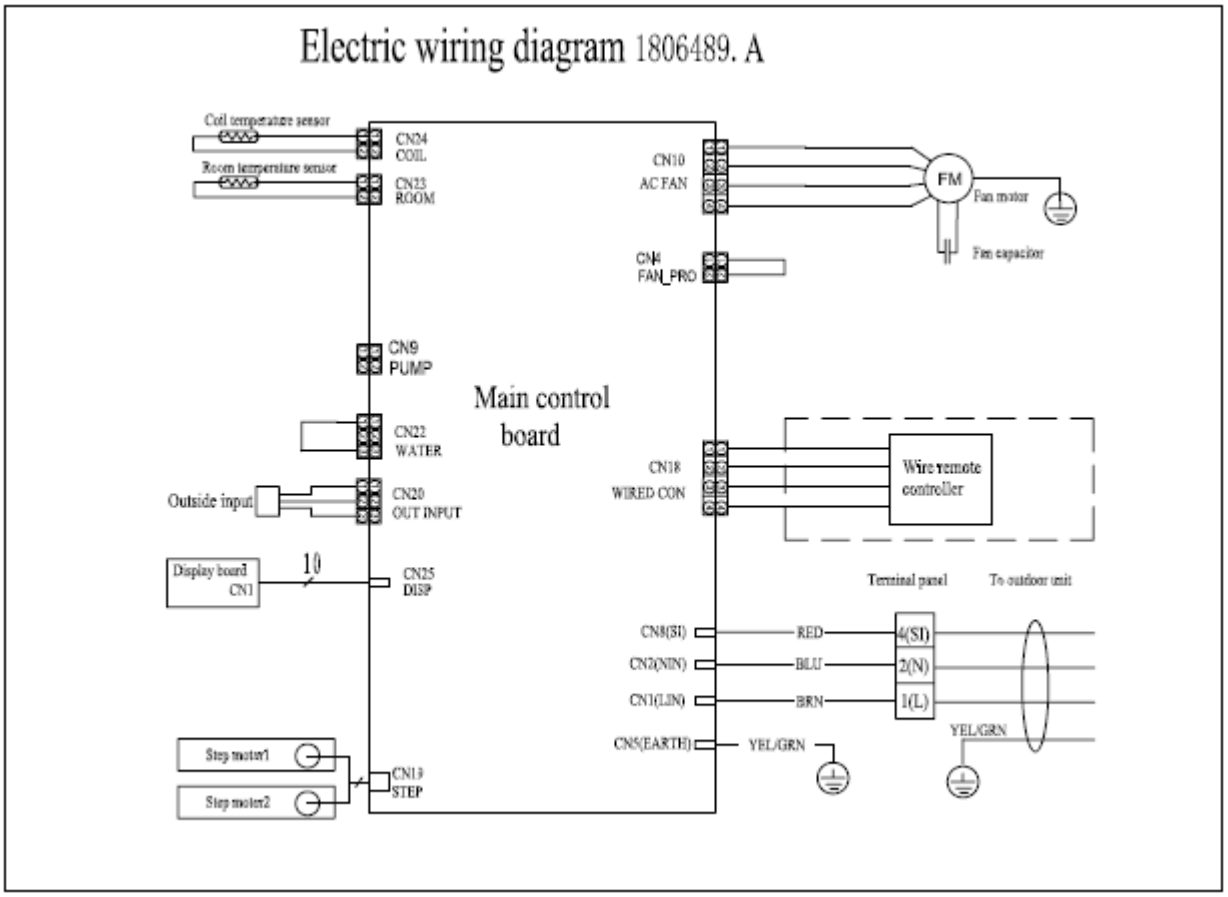
24K ,36K,48K,60K



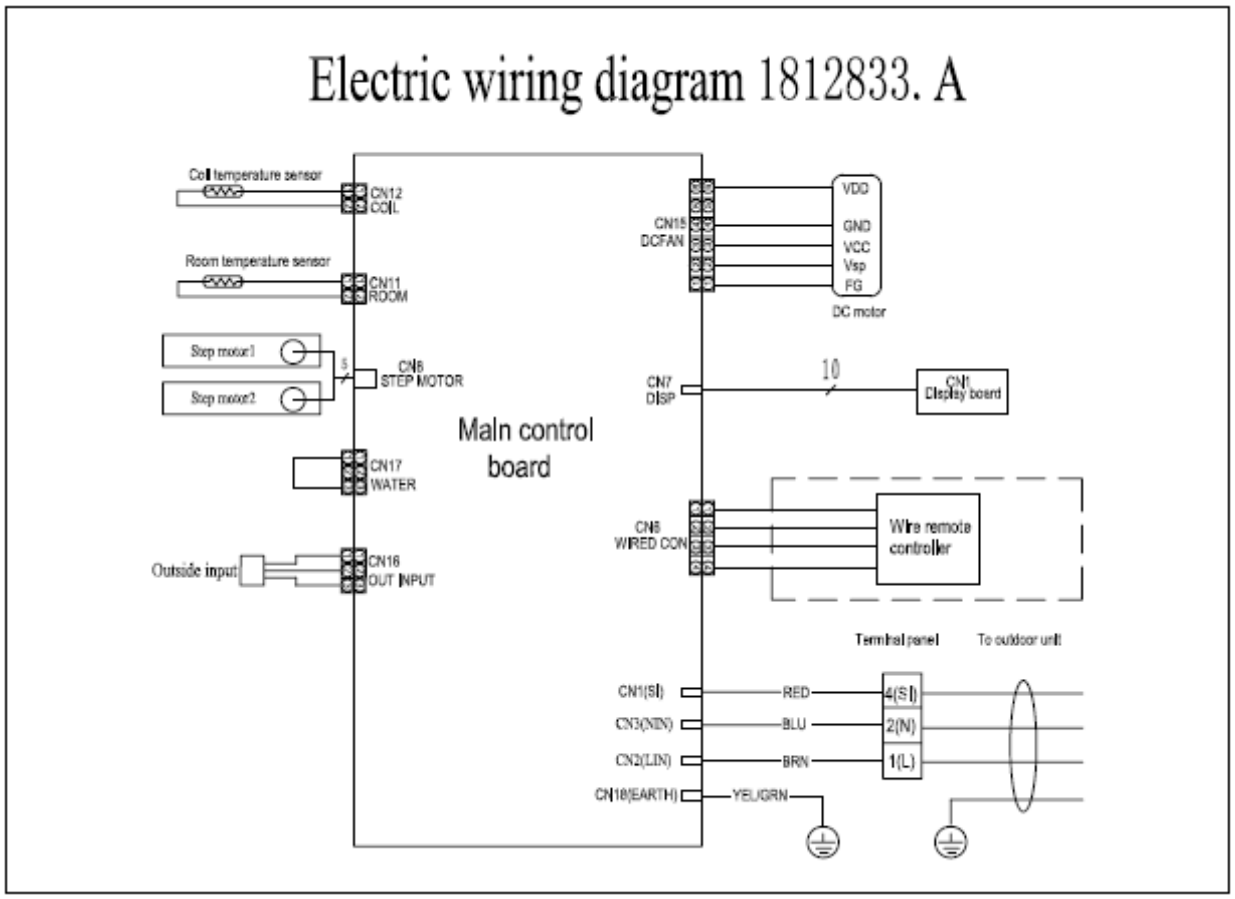
5. ELECTRICAL DATA

Ceiling&Floor type

18K,48K,60K



24K,36K

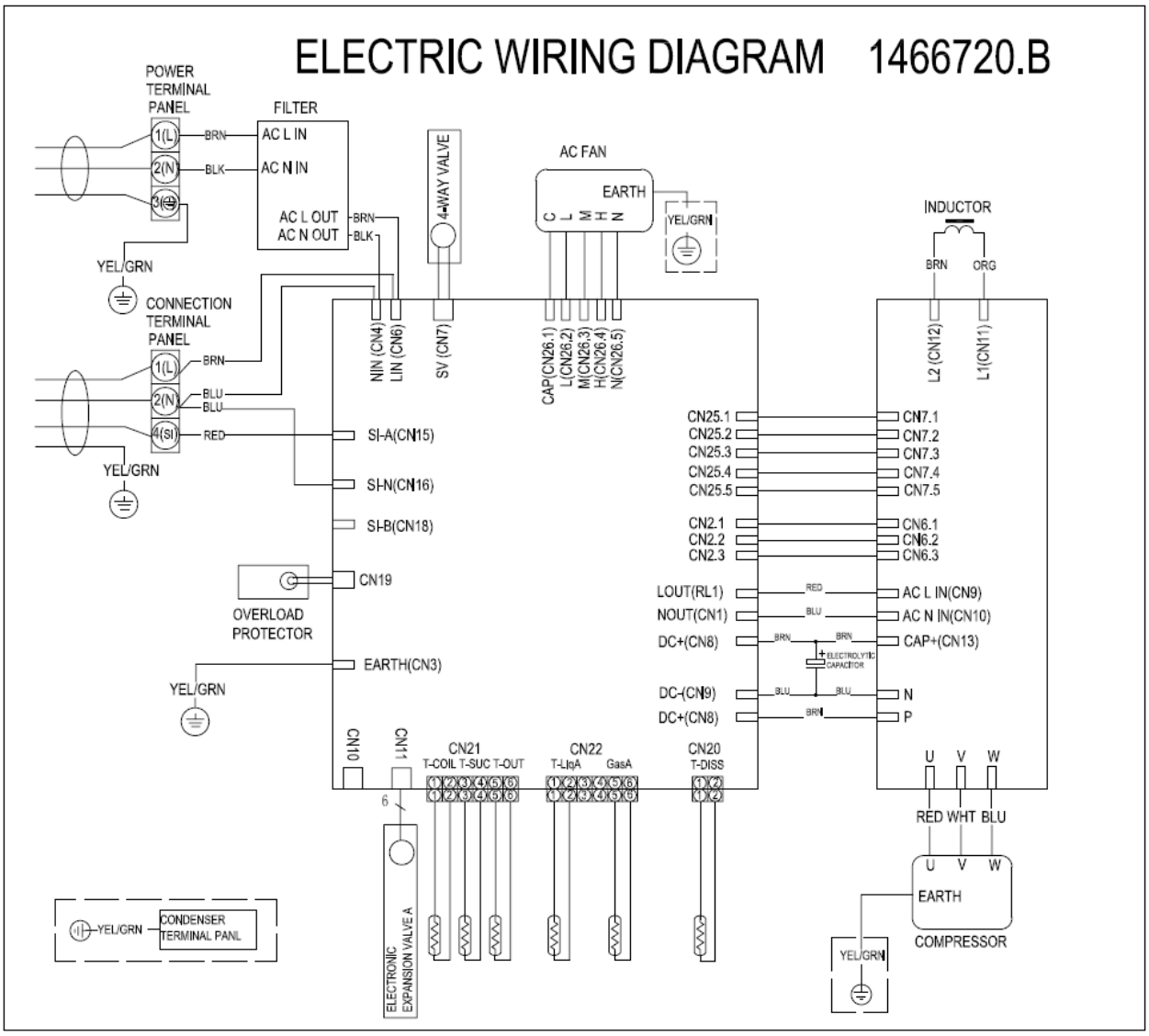


5. ELECTRICAL DATA

OUTDOOR UNIT

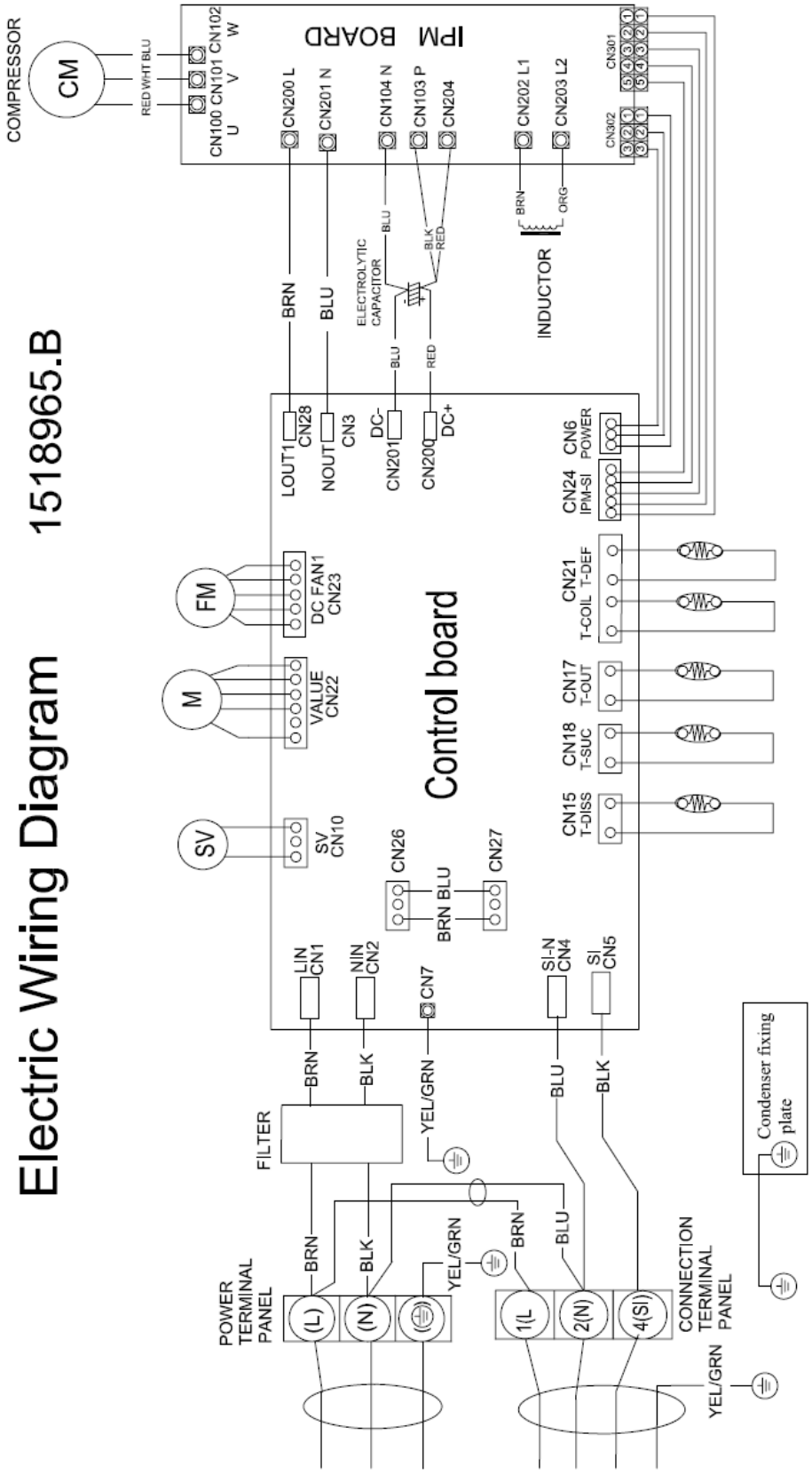
18K

AUW-18U4SG



5. ELECTRICAL DATA

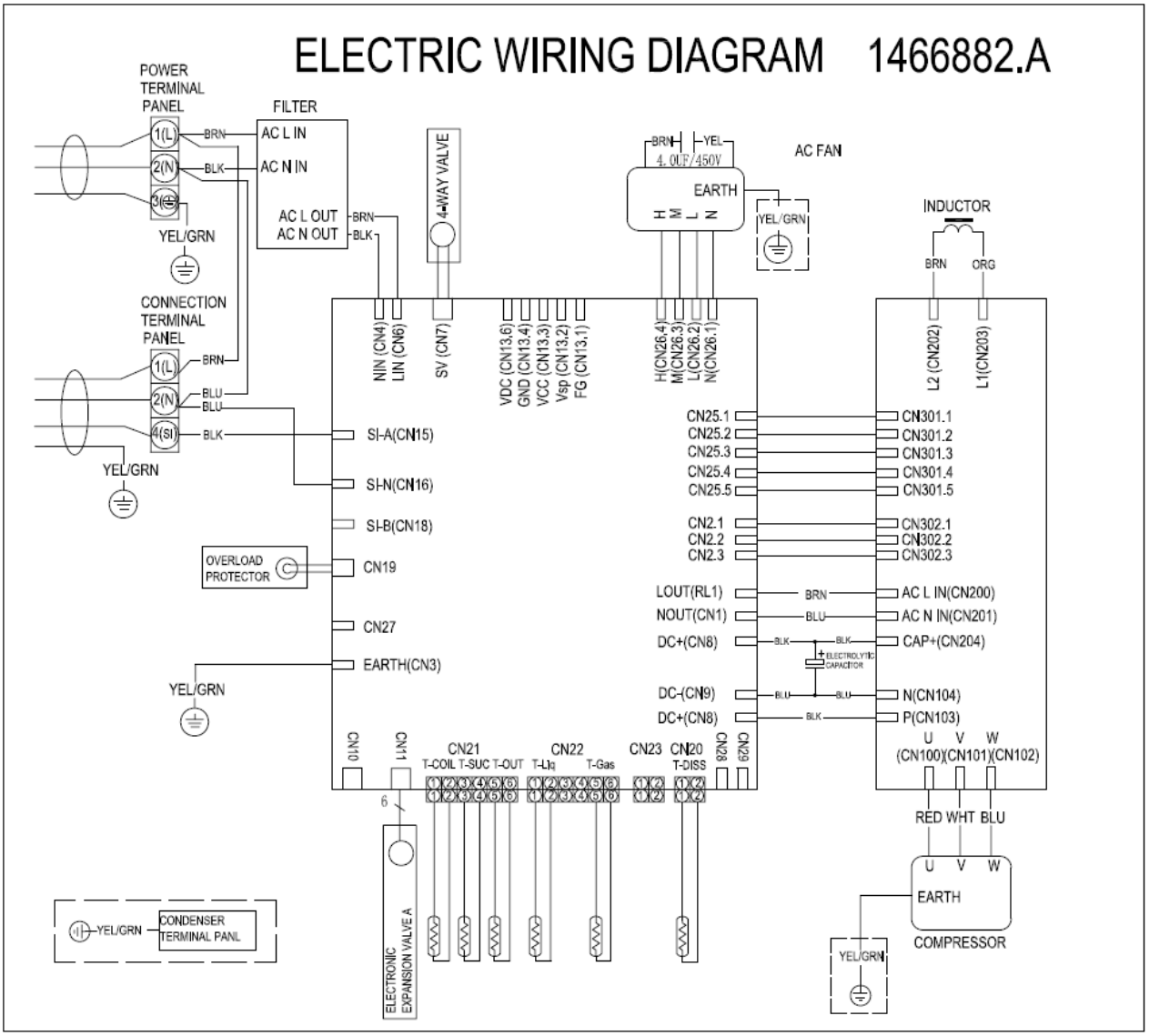
AUW-18U4SZ1



5. ELECTRICAL DATA

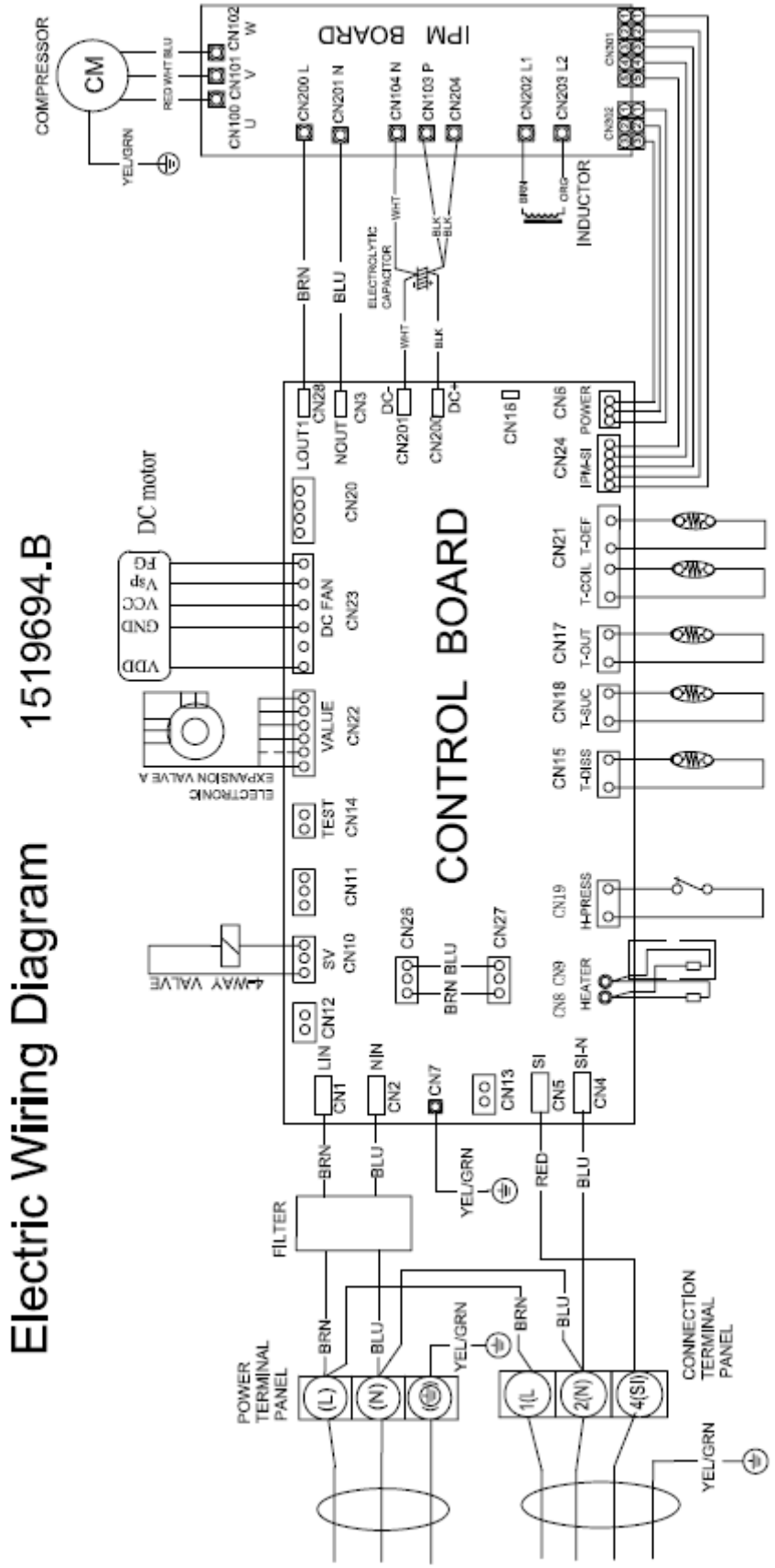
24K

AUW-24U4SZ



5. ELECTRICAL DATA

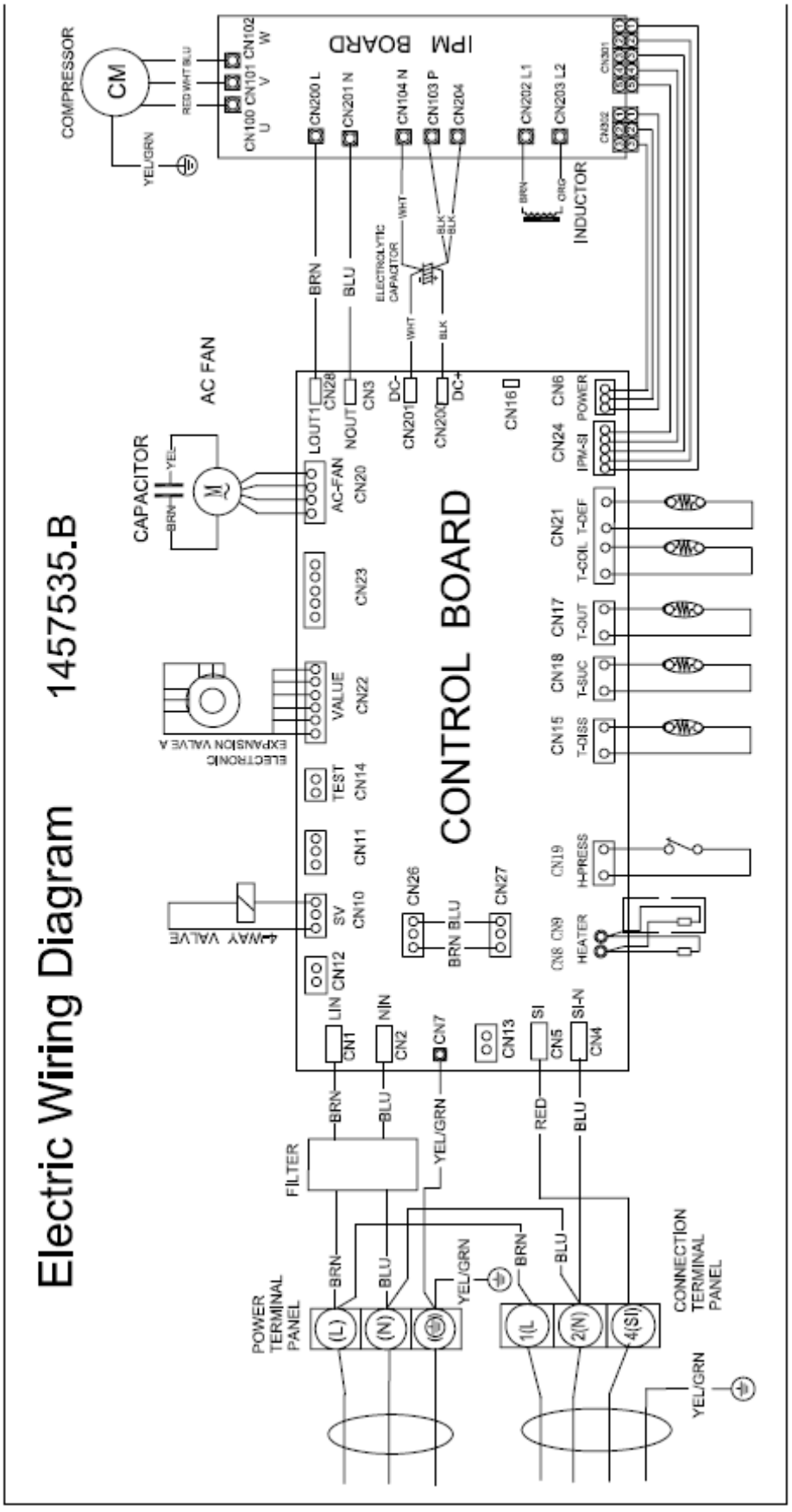
AUW-24U4SA1



5. ELECTRICAL DATA

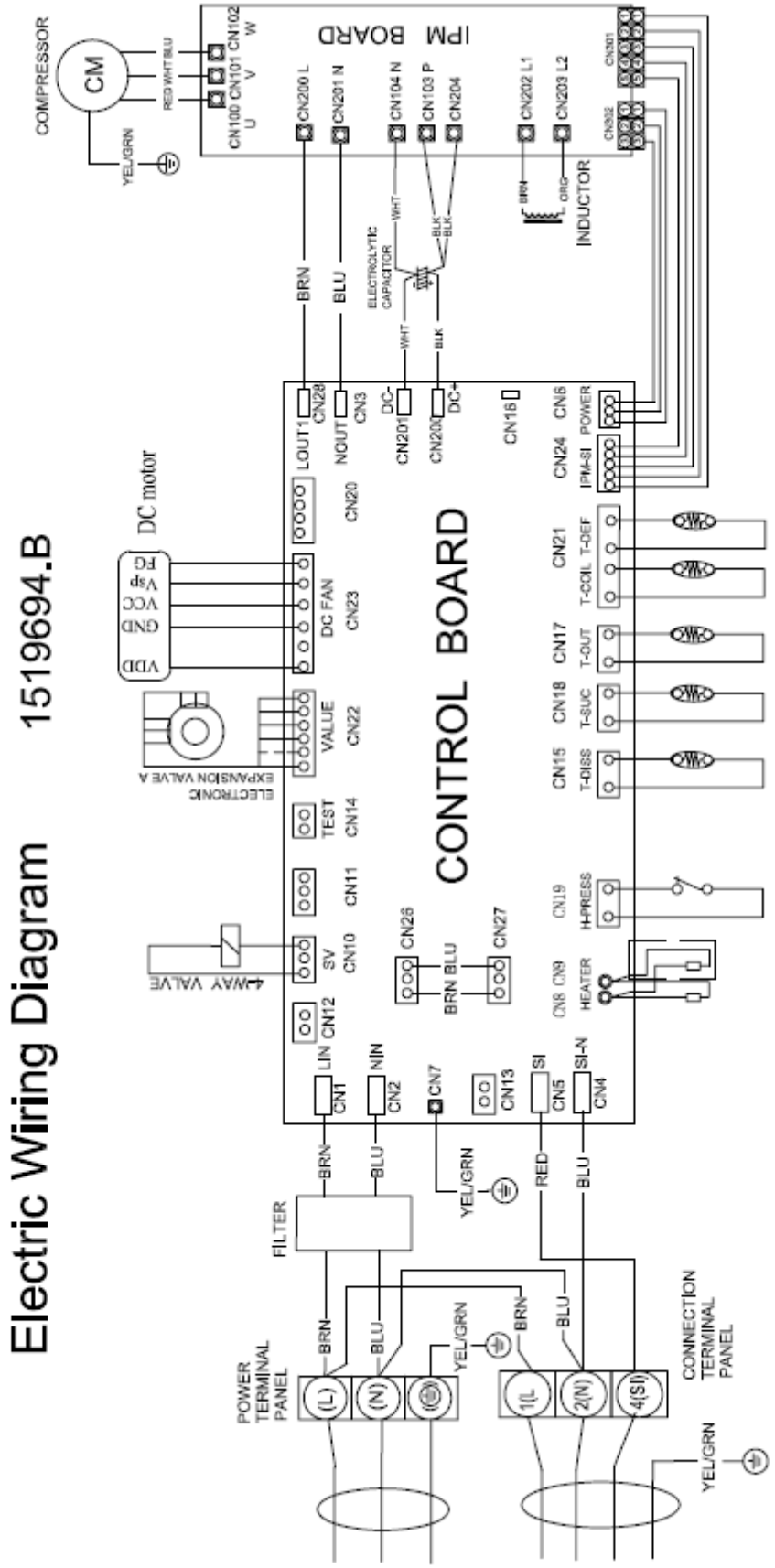
36K

AUW-36U4SA



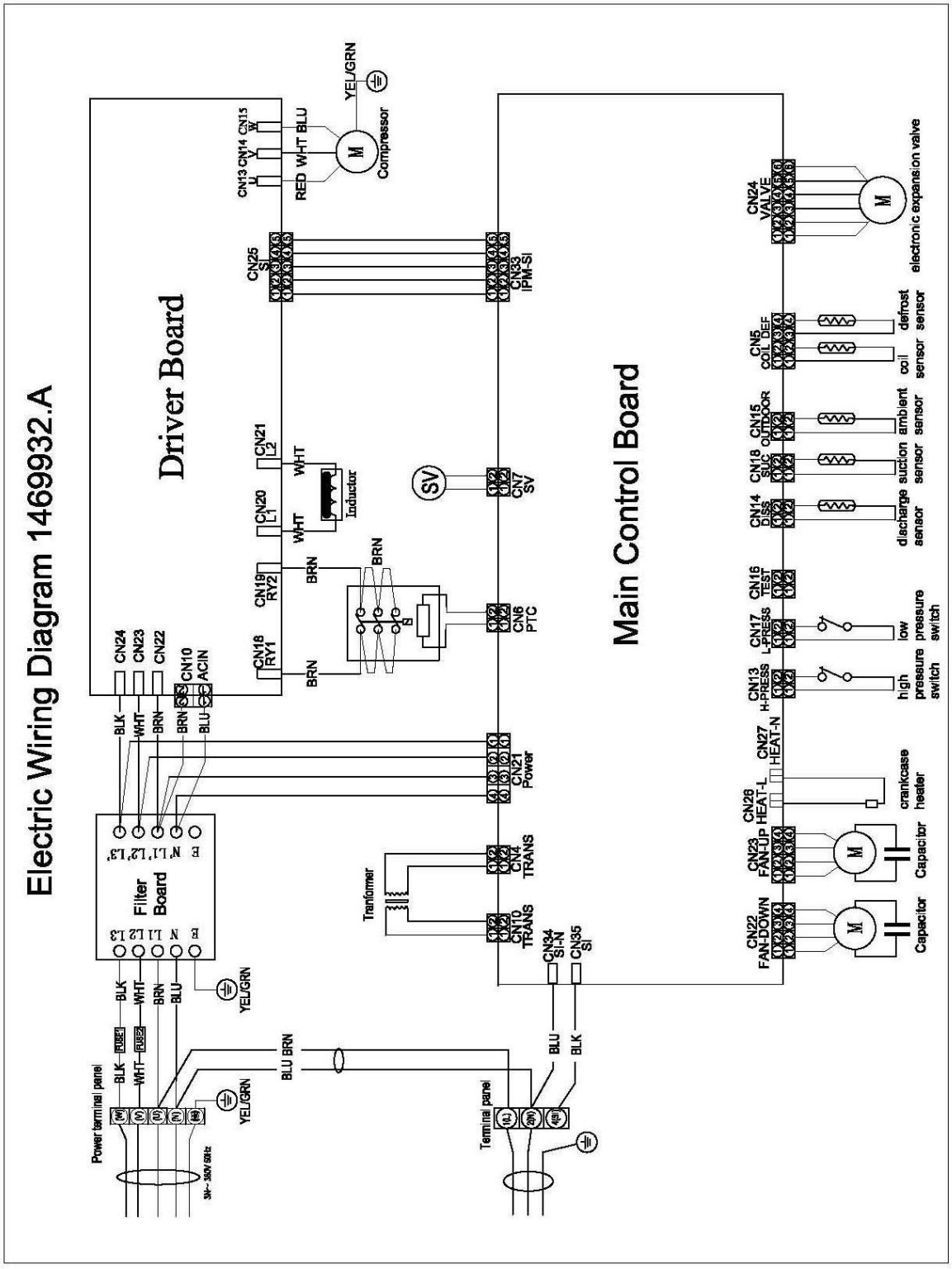
5. ELECTRICAL DATA

AUW-36U4SA1



5. ELECTRICAL DATA

AUW-48U6SP
AUW-60U6SP



5. ELECTRICAL DATA

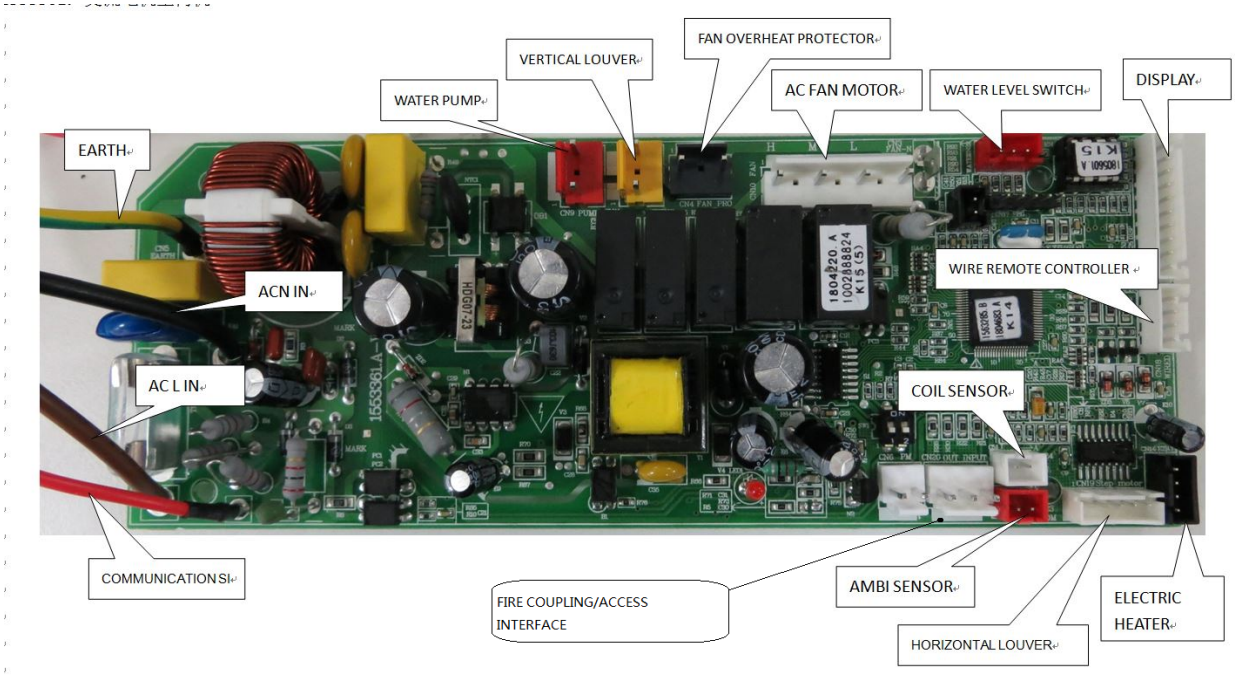
5-2. Electric control Board

1. Indoor control board

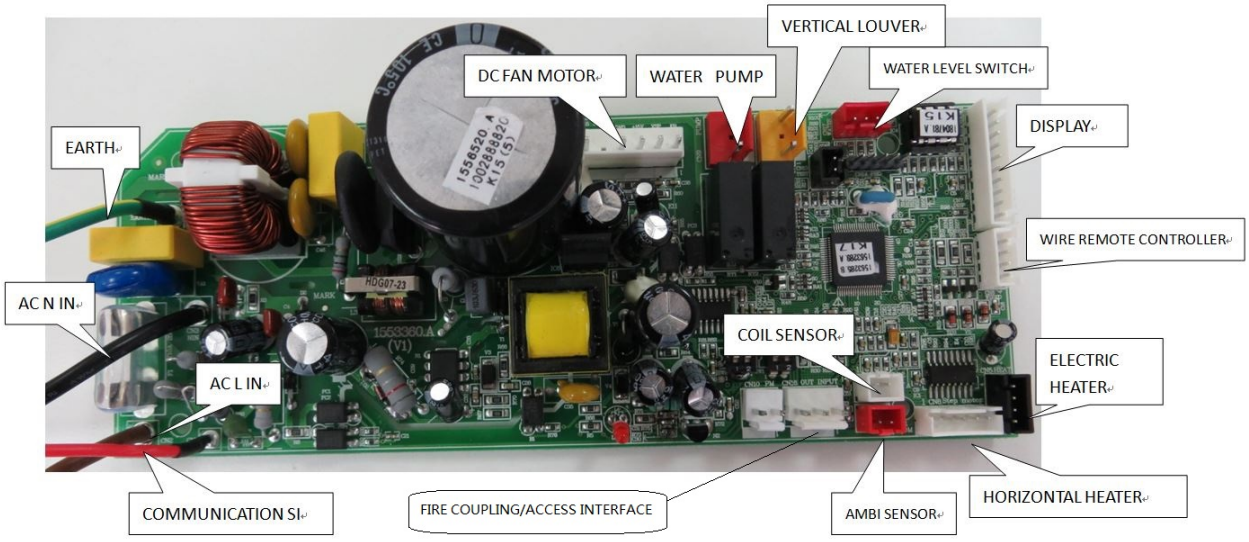
Duct type

18K,48K,60K

&AUD-24UX4SLH, AUD-36UX4SMH



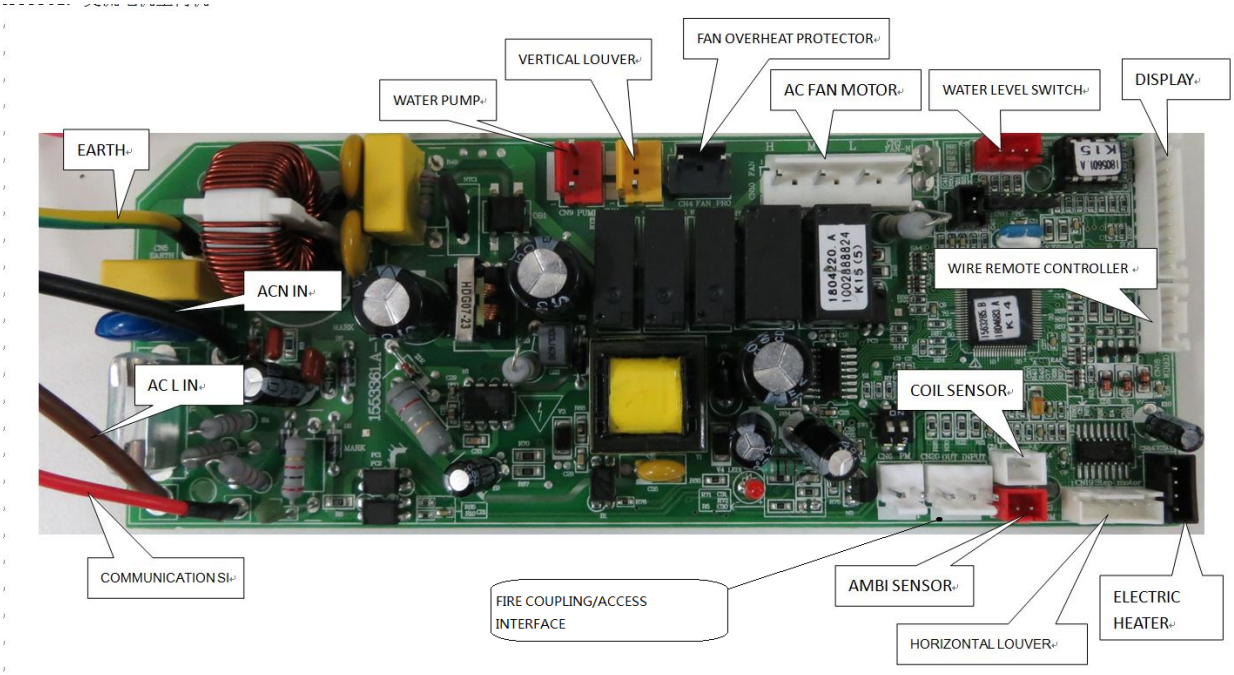
AUD-24UX4SLH1, AUD-36UX4SMH1



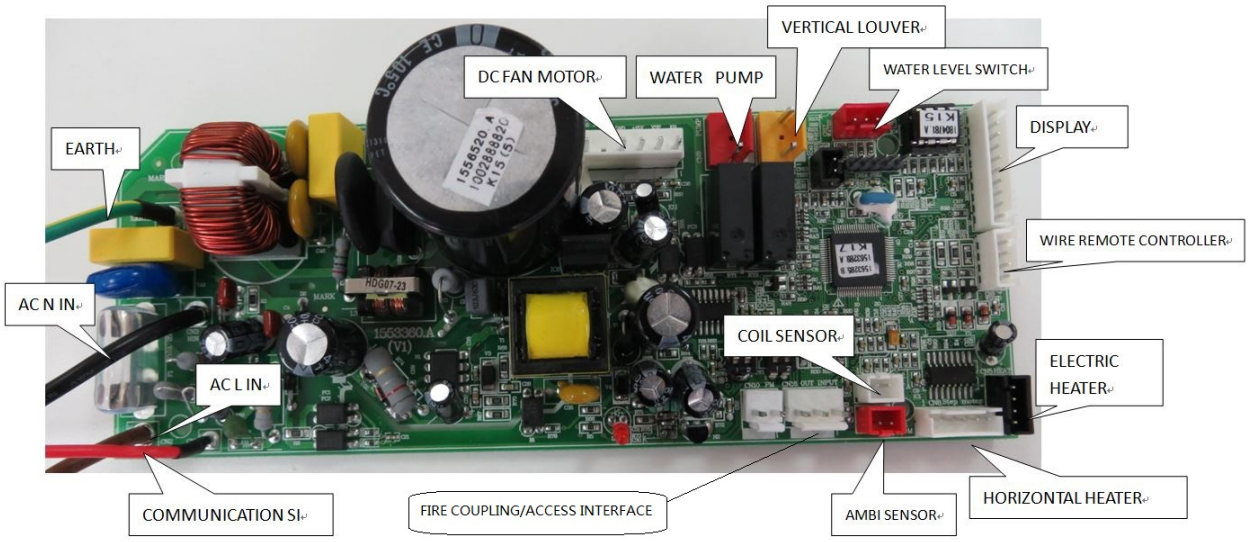
5. ELECTRICAL DATA

CASETTE Type

18K



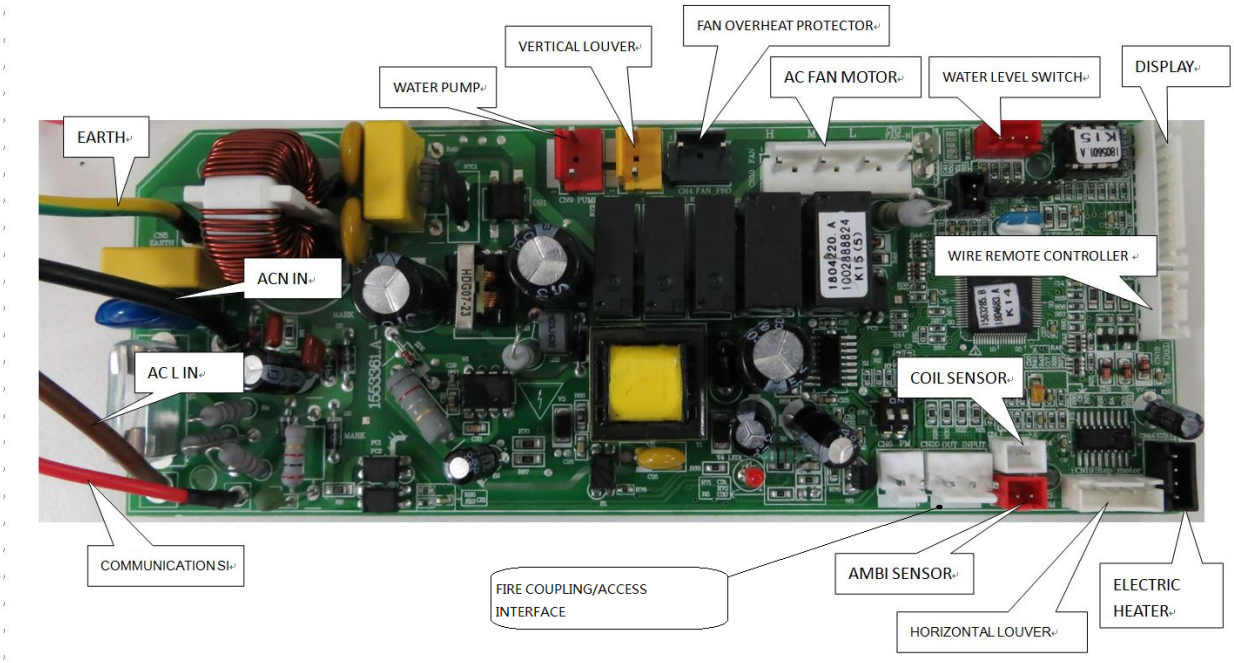
24K,36K,48K,60K



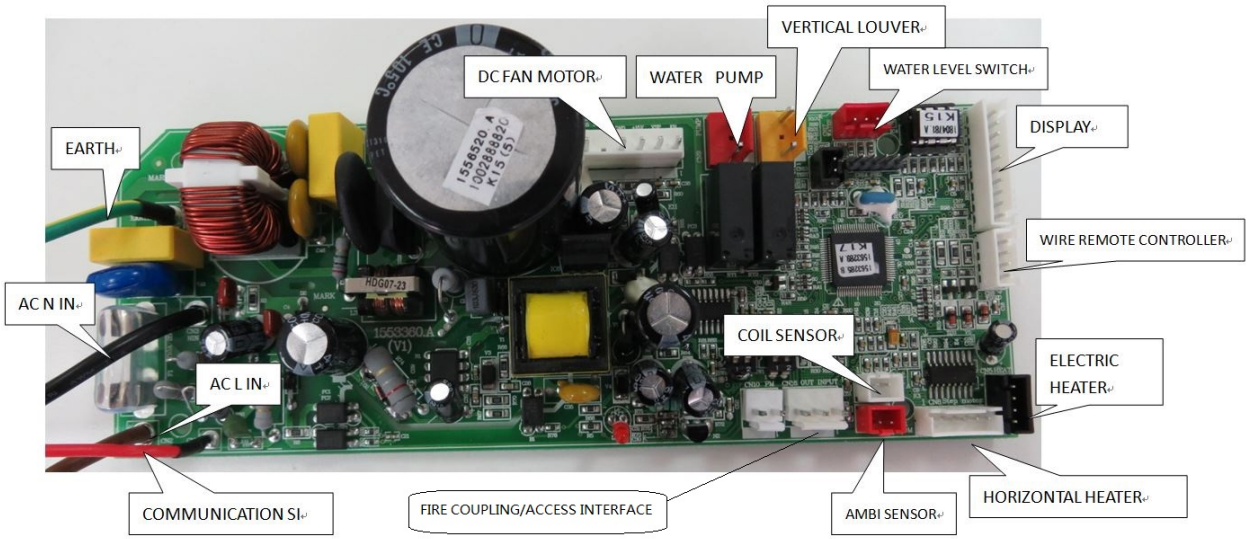
5. ELECTRICAL DATA

Ceiling & Floor type

18k,48k,60k



24k,36k

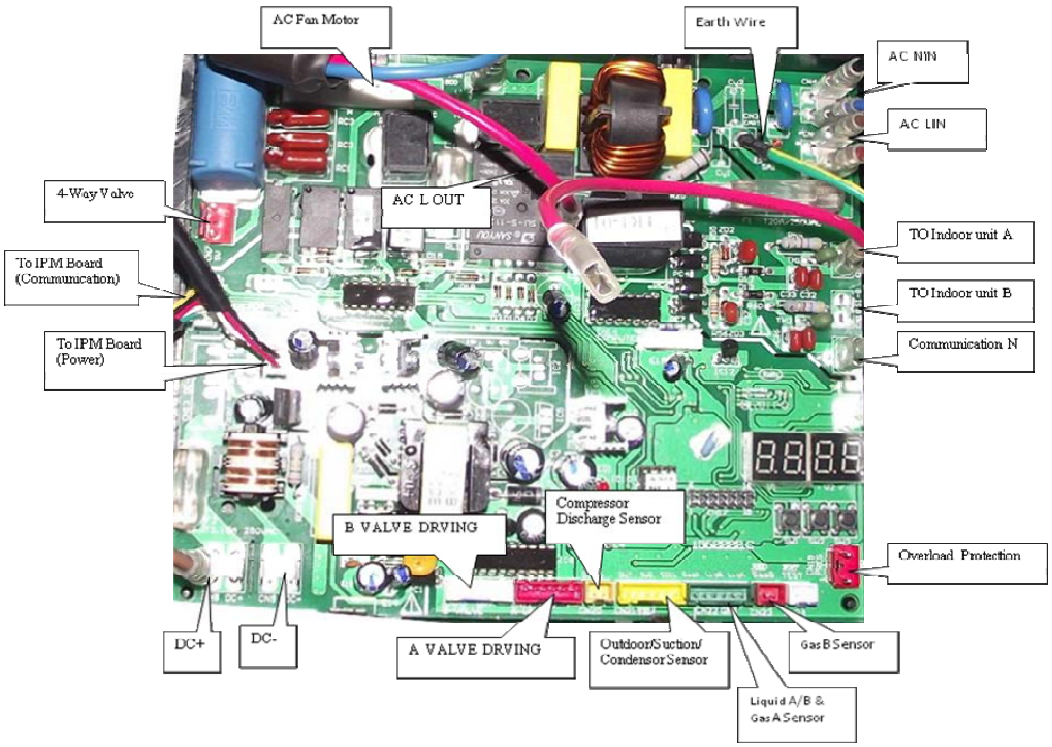


2.Control board for outdoor unit

1) OUTDOOR CONTROL BOARD

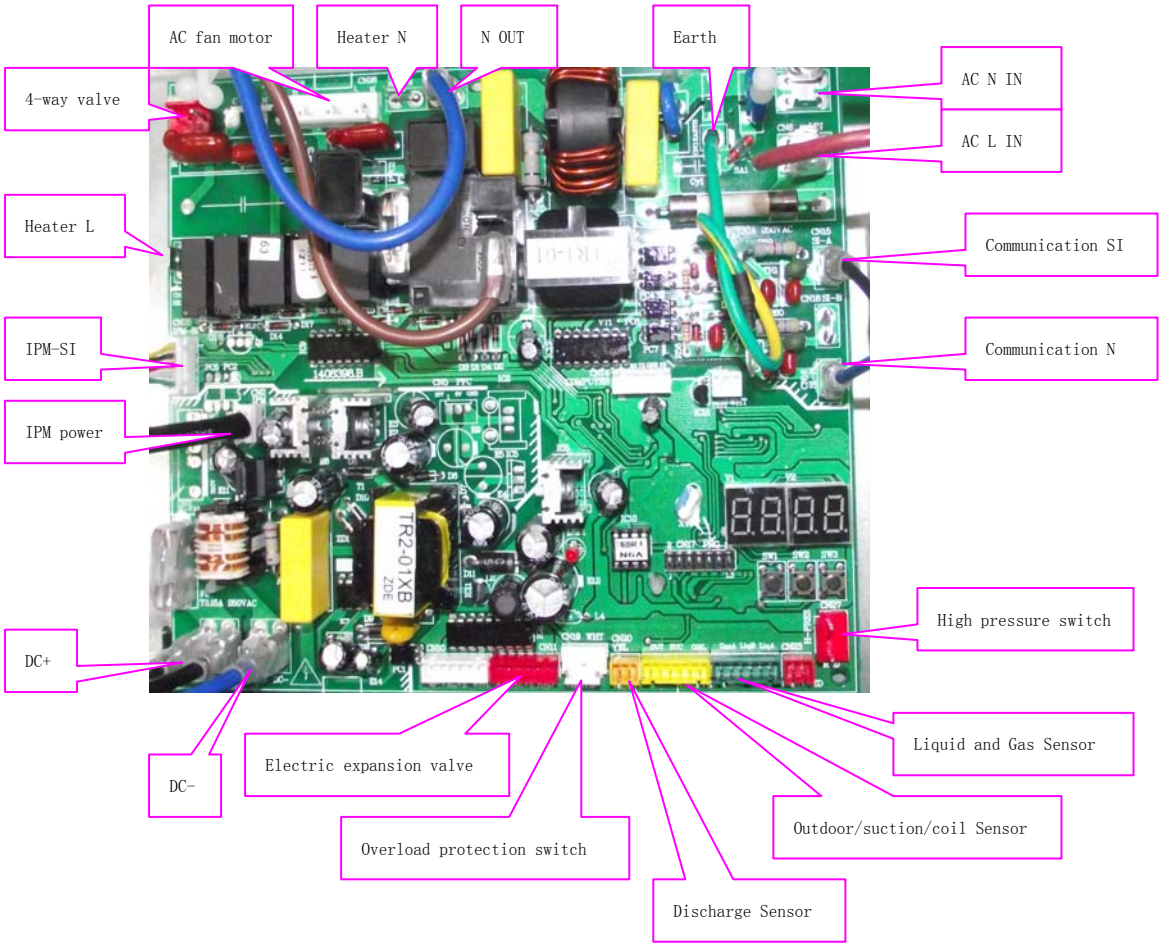
AUW-18U4SG

1) CONTROL BOARD（AUW-18U4SG）



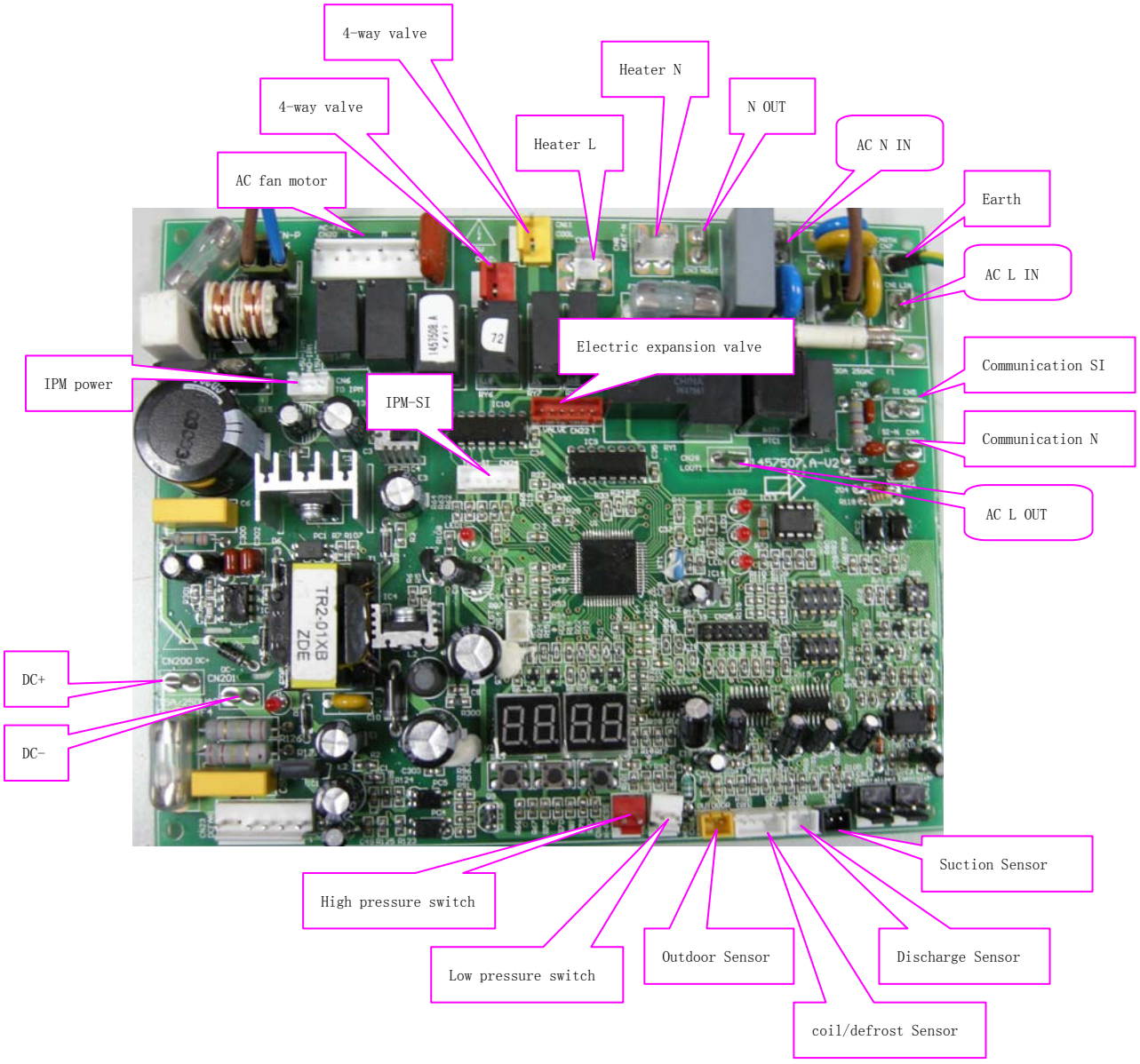
CONTROL BOARD（AUW-24U4SZ）

5. ELECTRICAL DATA

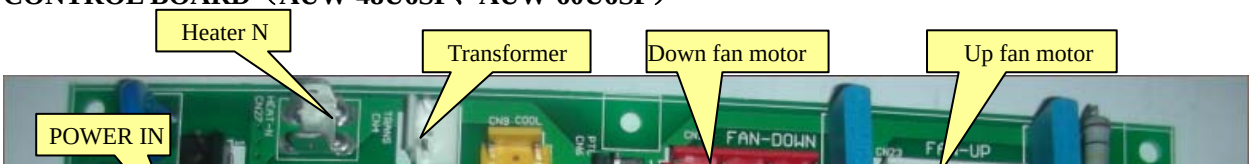


CONTROL BOARD（AUW-36U4SA）

5. ELECTRICAL DATA



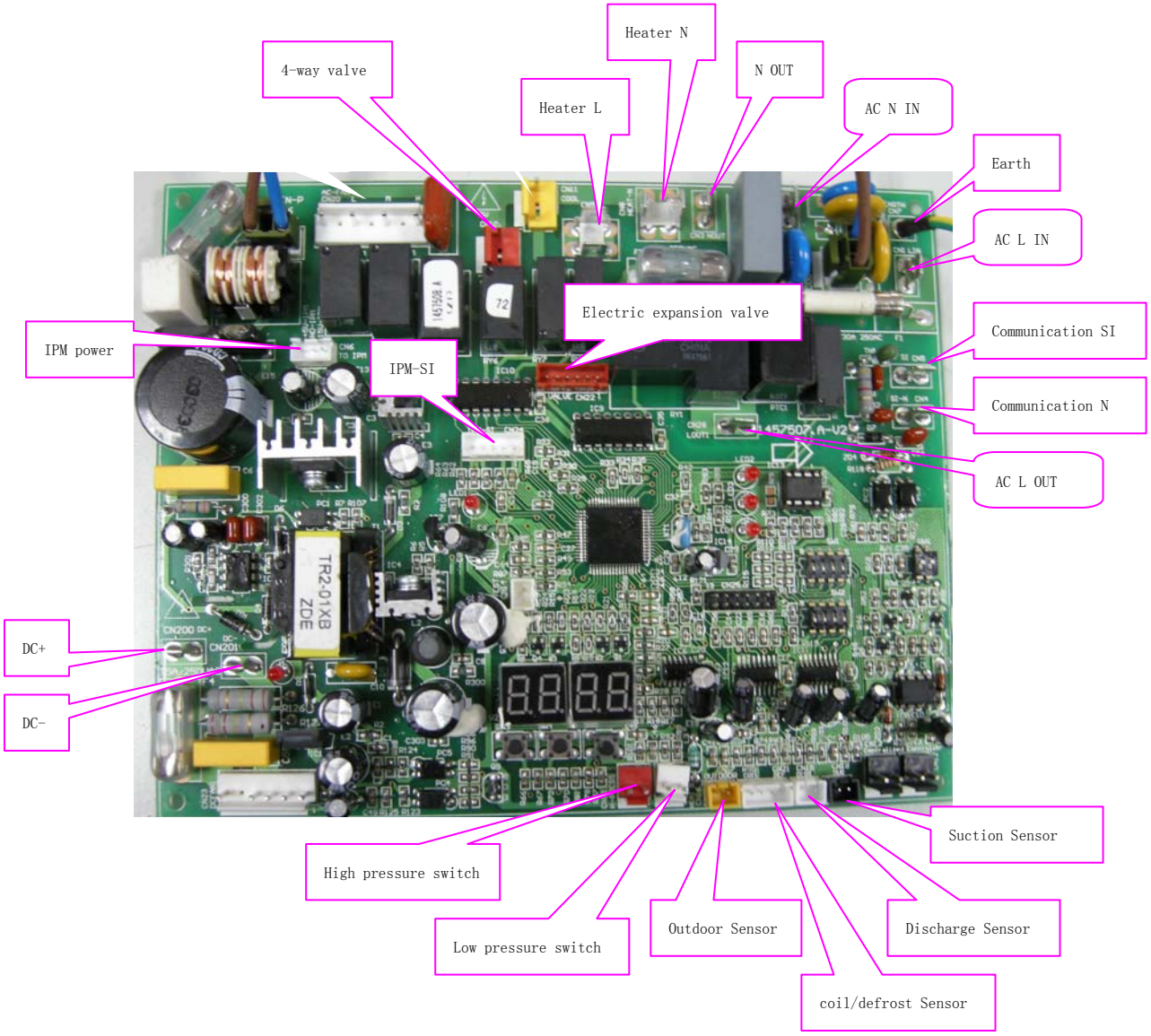
CONTROL BOARD（AUW-48U6SP、AUW-60U6SP）



5. ELECTRICAL DATA

（AUW-18U4SZ1，AUW-24U4SA1、AUW-36U4SA1）

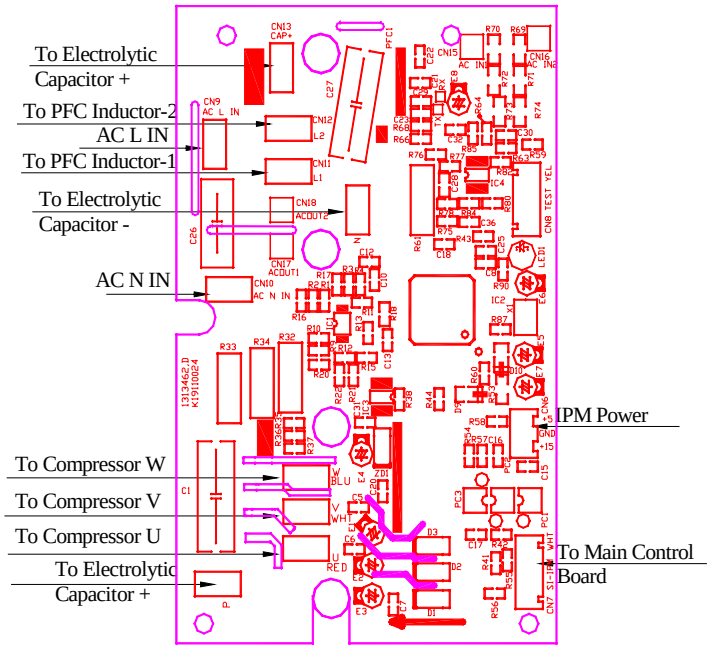
5. ELECTRICAL DATA



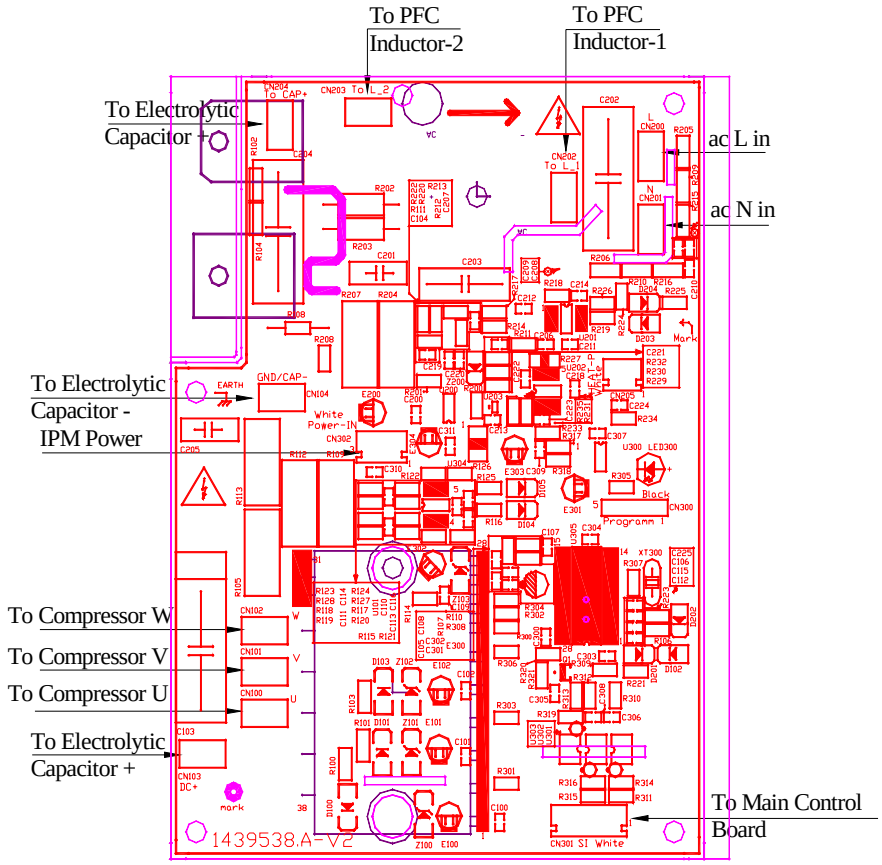
IPM Board

IPM Board（AUW-18U4SG）

5. ELECTRICAL DATA

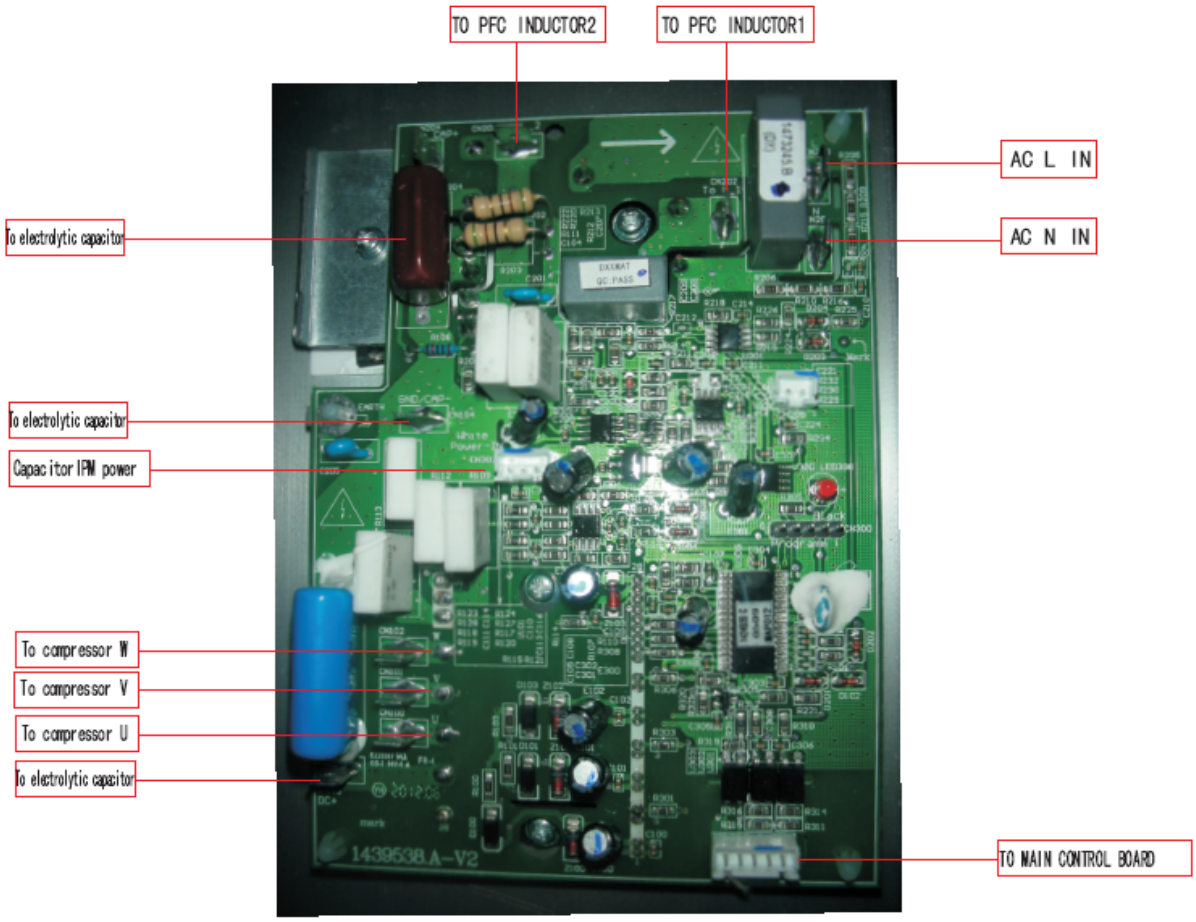


(AUW-24U4SZ / AUW-36U4SA)

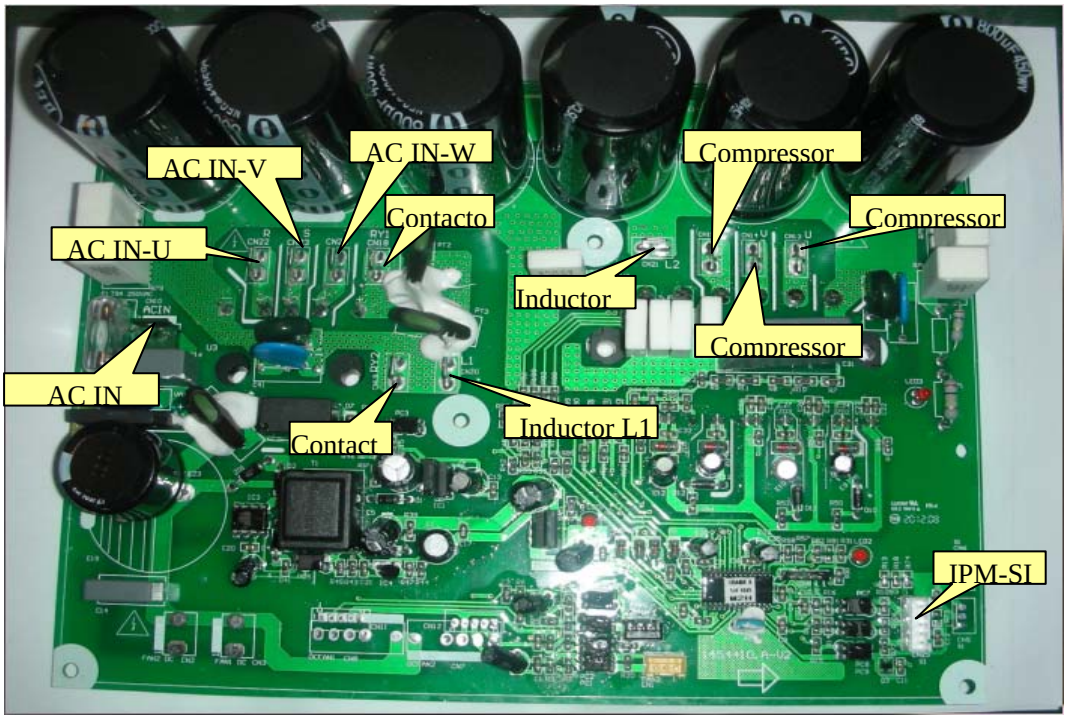


（AUW-18U4SZ1、AUW-24U4SA1、AUW-36U4SA1）

5. ELECTRICAL DATA



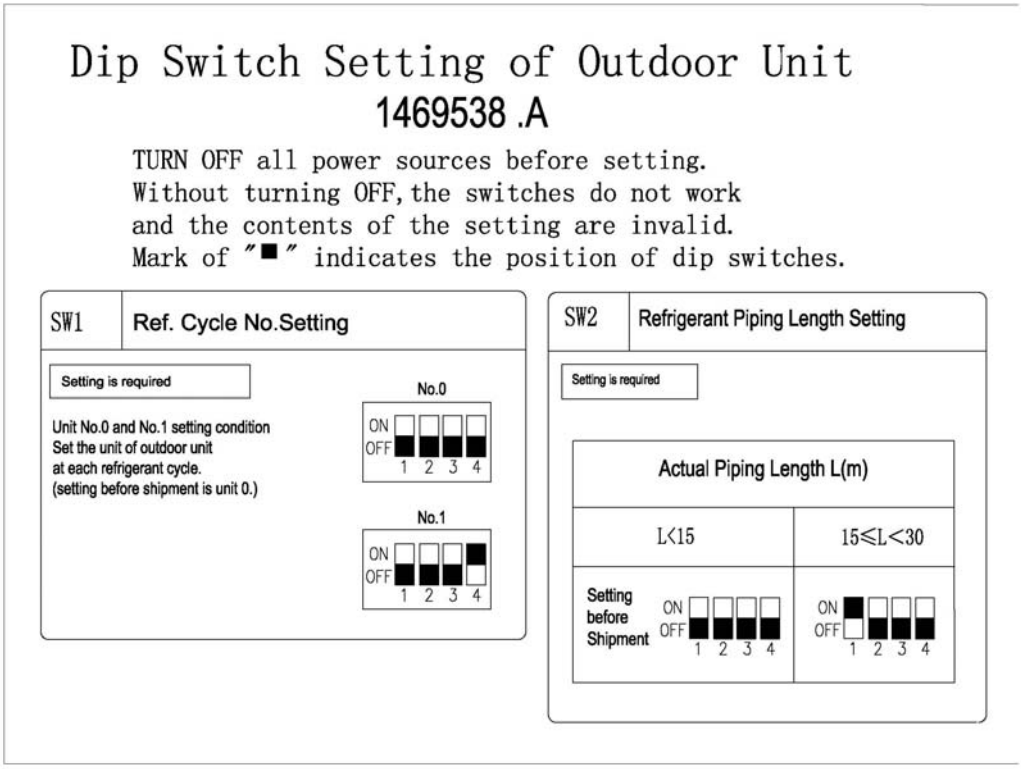
(AUW-48U6SP、AUW-60U6SP)



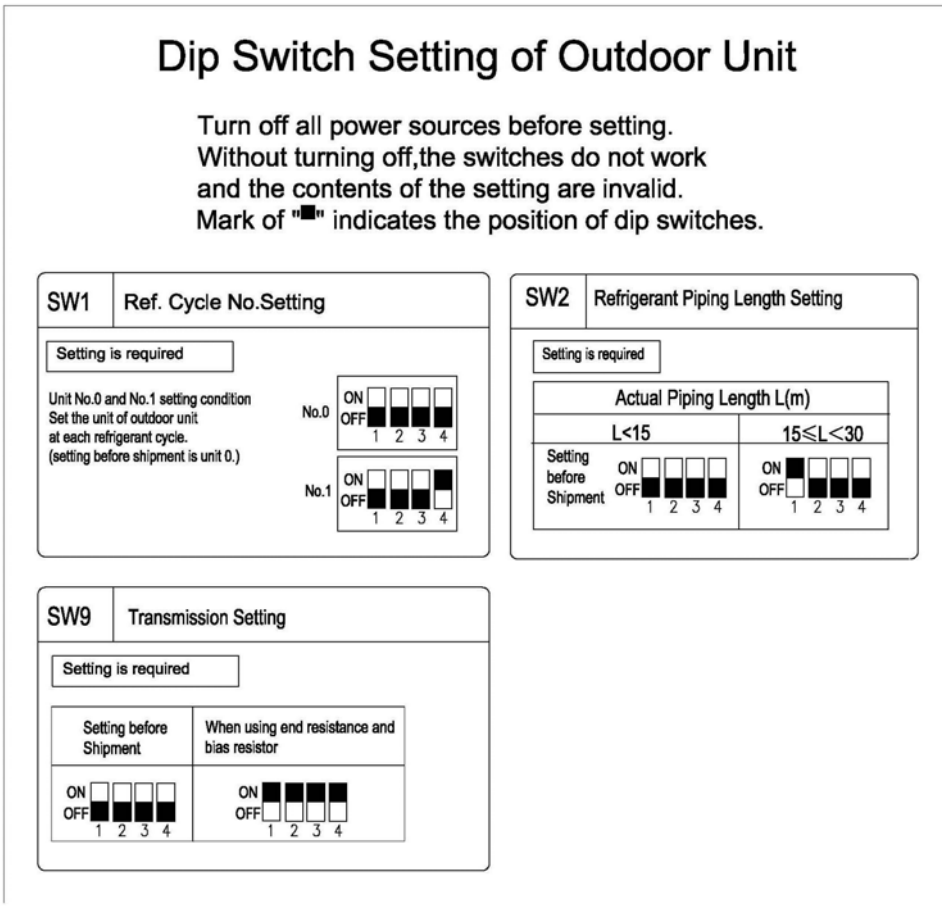
5. ELECTRICAL DATA

5-3. DIP SWITCH SETTING OF OUTDOOR

AUW-18U4SZ1,AUW-24U4SA1,AUW-36U4SA1,AUW-36W4SA

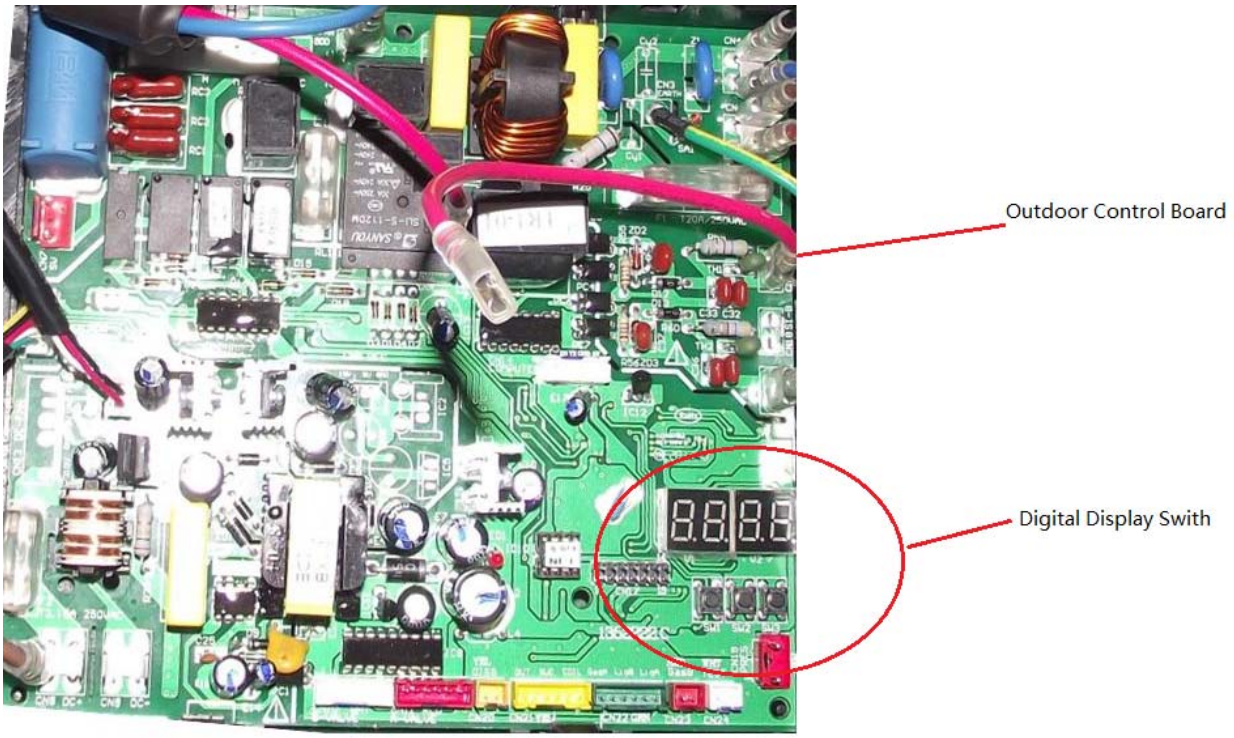


48K&60K



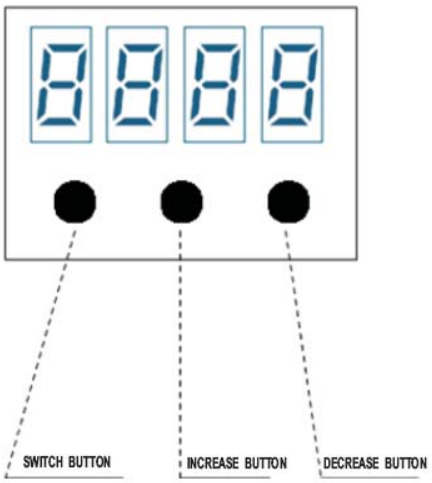
5. ELECTRICAL DATA

5-4. Digital Display Switch of Outdoor



Digital Display Switch Introduction

It can be used to check outdoor running parameters.



There are 3 buttons on the digital display board：

1) SWITH button : Indoor parameters and outdoor parameters can be select in turn by press it. P--outdoor unit,H--indoor unit ;

2) INCREASE button : Each time it is pressed,the number rises by 1,hold down it,the number will be rapidly rises ;

3) DECREASE button：Each time it is pressed,the number lowers by 1,hold down it,the number will be

rapidly lowers.

Parameters can be checked as following table below.

Parameter code	Descriptions
0	Protect Code or Error Code
P.1	Target Frequency
P.2	Driver Frequency
P.4	Outdoor Electronic expansion valve Opening
P.5	Outdoor Electronic expansion valve Target Opening
P.6	Upper DC Motor Revolving Speed
P.8	AC Input Voltage
P.9	Current
P.10	Modular Temperature
P.11	Capacity needed
P.12	Modular Trouble
P.20	Outdoor Ambient Temperature
P.21	Outdoor Coil Temperature
P.22	Outdoor Defrost Temperature
P.23	Suction Temperature
P.24	Discharge Temperature
H.1	Indoor Unit Error
H.2	Indoor Ambient Temperature
H.3	Indoor Coil Temperature
H.4	Indoor Setting Temperature

5. ELECTRICAL DATA

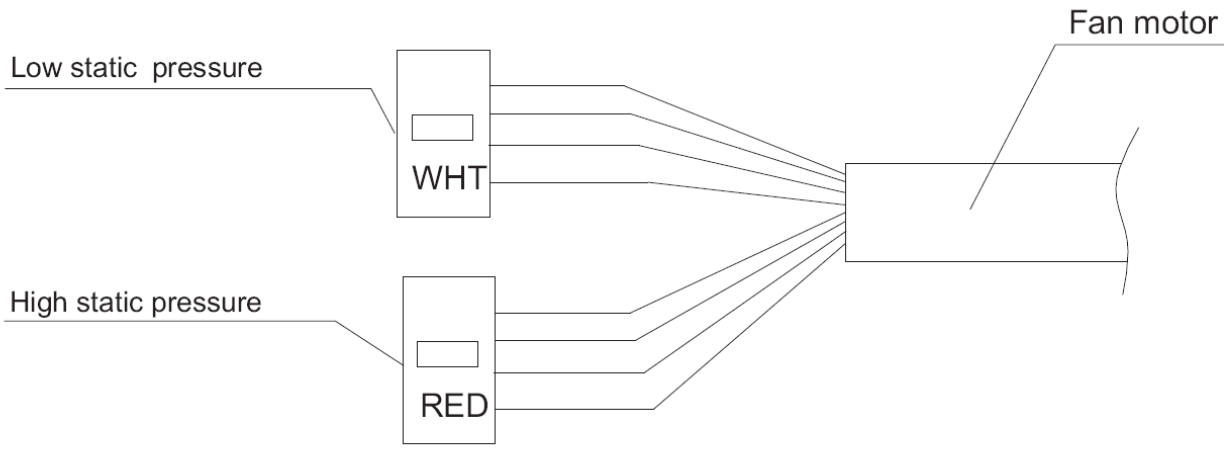
5-5. Static Pressure Setting(only for duct type)

CHANGE OF STATIC PRESSURE

The static pressure outside the indoor unit can be chosen .

Models except AUD-24UX4SALH1 & AUD-36UX4SAMH1 :

You can change the static pressure by changing the fan motor terminal which refer to following Fig.below:



Model	Low static pressure	High static pressure
18K	10Pa	30Pa
24K, 36K	50Pa	80Pa
48K, 60K	80Pa	120Pa

Note: Default Settings is low static pressure by factory.
The noise under high static pressure is higher than static pressure .

AUD-24UX4SALH1 & AUD-36UX4SAMH1 :

Default static pressure is 30 Pa.

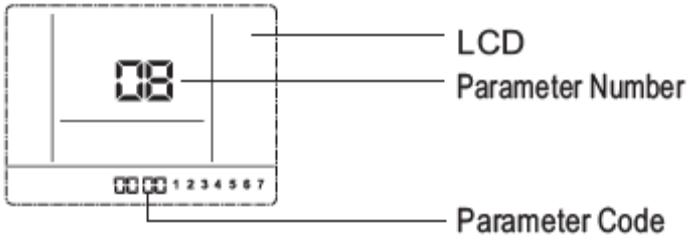
The static pressure can be freely adjusted from 1 Pa to 80 Pa by using specific wire remote controller(YXE-C01U).

Operation details, please refer to wire remote controller manuals .

If you still have any trouble, please contact local technical service center of our company for further information.

5. ELECTRICAL DATA

Internal control parameter adjustment can be performed.



OPERATION:

①Hold down both "MODE"button and "ADD. FUNC. "button for 3 seconds symbol and parameter number blinking at the same time.

②Press "▲" "▼" button to adjust parameter number until display "17" . And press "ENTER"button to entering system parameter adaption state, symbol stop blinking.

③Select desired parameter code by pressing "▲" "▼" button following th table below.Press the "ENTER" button to rewrite the parameter values using "▲" "▼" buttons :

10	Static Pressure Setting	Can Be Adjusted Between 1-80. Static Pressure Value = Parameter Code (Pa) Default Setting: 0 (30Pa)	

④Press "ENTER" button, save the changes and return to the function selectio

EXIT:

Press "ON/OFF" button to exit, or no operation within 30 seconds automatically ex

Parameter code will not display if the indoor unit is not equipped with this functic
Please refer to indoor unit manual to check whether this function is effective.

5. ELECTRICAL DATA

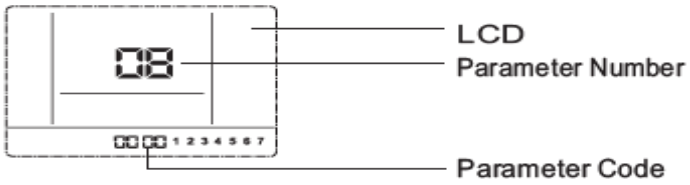
5-6.AMBIENT TEMPERATURE REVISE(INDOOR)

when indoor unit highly mounted,because of hot air floatation,cold air sinks,so the ambient temperature sensed by indoor unit is higher than the actual.Then the ambient temperature need to be revised.

It can be changed by using specific wire remote controller(YXE-C01U).

Operation details, please refer to wire remote controller manuals .

Internal control parameter adjustment can be performed.



OPERATION:

①Hold down both "MODE"button and "ADD. FUNC. "button for 3 seconds symbol and parameter number blinking at the same time.

②Press "▲" "▼" button to adjust parameter number until display "17" . And press "ENTER"button to entering system parameter adaption state, symbol stop blinking.

③Select desired parameter code by pressing "▲" "▼" button following th table below.Press the "ENTER" button to rewrite the parameter values using "▲" "▼" buttons :

PARAMETER NUMBER	FUNCTION DESCRIPTION	PARAMETER REWRITE	NOTE
8	Temperature need to be correct when indoor unit highly mounted, because of hot air floatation, cold air sinks, so the ambient temperature sensed by indoor unit is higher than the actual.	Can Be Adjusted Between 1-10.	Indoor unit ambient temperature correction is only valid when using the indoor temperature sensor.
9		

PARAMETER CODE	1	2	3	4	5	6	7	8	9	10
CORRECT VALUE (℃)	-0.5	-1	-1.5	-2	-2.5	-3	-3.5	-4	-4.5	-5

5. ELECTRICAL DATA

5-7. Sensor parameter

1. THE PARAMETER OF OUTDOOR COMPRESSOR DISCHARGE TEMPERATURE SENSOR:
（R_0=187.25K±6.3%；R_{100}=3.77K±2.5K；B0/100=3979K±1%）

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
-30	908.2603	985.5274	1065.1210	-7.84	7.47
-29	855.3955	927.6043	1001.9150	-7.78	7.42
-28	805.9244	873.4324	924.8368	-7.73	5.56
-27	759.6097	822.7471	887.5944	-7.67	7.31
-26	716.2320	775.3041	835.9165	-7.62	7.25
-25	675.5881	730.8775	787.5529	-7.56	7.20
-24	637.4902	689.2583	742.2720	-7.51	7.14
-23	601.7645	650.2533	699.8601	-7.46	7.09
-22	568.2499	613.6835	660.1191	-7.40	7.03
-21	536.7970	579.3832	622.8658	-7.35	6.98
-20	507.2676	547.1989	587.9307	-7.30	6.93
-19	497.5332	516.9882	555.1565	-3.76	6.88
-18	453.4748	488.6192	524.3977	-7.19	6.82
-17	428.9819	461.9693	495.5191	-7.14	6.77
-16	405.9517	436.9251	486.3954	-7.09	10.17
-15	384.2888	413.3808	442.9105	-7.04	6.67
-14	363.9047	391.2386	418.9563	-6.99	6.62
-13	344.7169	370.4072	396.4325	-6.94	6.56
-12	326.6497	350.8019	375.2461	-6.88	6.51
-11	309.6286	332.3441	355.3104	-6.83	6.46
-10	293.5903	314.9620	336.5448	-6.79	6.41
-9	278.4719	298.5822	318.3744	-6.74	6.22
-8	264.2156	283.1464	302.2294	-6.69	6.31
-7	250.7678	268.5936	286.5448	-6.64	6.26
-6	238.0783	254.8686	271.7603	-6.59	6.22
-5	226.1003	241.9200	257.8193	-6.54	6.17
-4	214.7903	229.6997	244.6593	-6.49	6.11
-3	204.1073	218.1630	232.2612	-6.44	6.07
-2	194.0135	207.2681	220.5495	-6.39	6.02
-1	184.4732	196.9759	209.4913	-6.35	5.97
0	175.4533	187.2500	199.0468	-6.30	5.93
1	166.8952	178.0255	189.1529	-6.25	5.88
2	158.8023	169.3067	179.8058	-6.20	5.84
3	151.1467	161.0633	170.9724	-6.16	5.80
4	143.9026	153.2667	162.6216	-6.11	5.75
5	137.0455	145.8905	154.7246	-6.06	5.71
6	130.5528	138.9097	147.2544	-6.02	5.67
7	124.4033	132.3011	140.1856	-5.97	5.62
8	118.5769	126.0429	133.4946	-5.92	5.58
9	113.0550	120.1146	127.1591	-5.88	5.54

5. ELECTRICAL DATA

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
10	107.8202	114.4973	121.1586	-5.83	5.50
11	102.8560	109.1728	115.4734	-5.79	5.46
12	98.1470	104.1246	110.0855	-5.74	5.41
13	93.6787	99.3367	104.9778	-5.70	5.37
14	89.4378	94.7946	100.1342	-5.65	5.33
15	85.4114	90.4842	95.5398	-5.61	5.29
16	81.5875	86.3926	91.1805	-5.56	5.25
17	77.9551	82.5076	87.0430	-5.52	5.21
18	74.5034	78.8177	83.1150	-5.47	5.17
19	71.2227	75.3122	79.3848	-5.43	5.13
20	68.1036	71.9808	75.8414	-5.39	5.09
21	65.1373	68.8141	72.4746	-5.34	5.05
22	62.3155	65.8032	69.2746	-5.30	5.01
23	59.6306	62.9395	66.2324	-5.26	4.97
24	57.0752	60.2152	63.3395	-5.21	4.93
25	54.6424	57.6227	60.5877	-5.17	4.89
26	52.3258	55.1551	57.9695	-5.13	4.85
27	50.1192	52.8058	55.4778	-5.09	4.82
28	48.0168	50.5684	53.1058	-5.05	4.78
29	46.0133	48.4371	50.8472	-5.00	4.74
30	44.1034	46.4046	48.6960	-4.96	4.71
31	42.2825	44.4711	46.6466	-4.92	4.66
32	40.5458	42.6261	44.6937	-4.88	4.63
33	38.8891	40.8668	42.8323	-4.84	4.59
34	37.3084	39.1890	41.0576	-4.80	4.55
35	35.7998	37.5883	39.3653	-4.76	4.51
36	34.3596	36.0609	37.7511	-4.72	4.48
37	32.9844	34.6030	36.2109	-4.68	4.44
38	31.6710	33.2113	34.7412	-4.64	4.40
39	30.4164	31.8823	33.3383	-4.60	4.37
40	29.2176	30.6130	31.9988	-4.56	4.33
41	28.0718	29.4004	30.7197	-4.52	4.29
42	26.9765	28.2417	29.4979	-4.48	4.26
43	25.9293	27.1342	28.3306	-4.44	4.22
44	24.9277	26.0755	27.2150	-4.40	4.19
45	23.9697	25.0632	26.1488	-4.36	4.15
46	23.0530	24.0950	25.1293	-4.32	4.12
47	22.1757	23.1688	24.1545	-4.29	4.08
48	21.3360	22.2826	23.2221	-4.25	4.05
49	20.5321	21.4345	22.3301	-4.21	4.01
50	19.7623	20.6226	21.4766	-4.17	3.98
51	19.0261	19.8468	20.6612	-4.14	3.94
52	18.3211	19.1040	19.8808	-4.10	3.91

5. ELECTRICAL DATA

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
53	17.6458	18.3926	19.1338	-4.06	3.87
54	16.9986	17.7113	18.4185	-4.02	3.84
55	16.3784	17.0537	17.7335	-3.96	3.83
56	15.7839	16.4332	17.0774	-3.95	3.77
57	15.2139	15.8338	16.4488	-3.92	3.74
58	14.6673	15.2592	15.8464	-3.88	3.71
59	14.1430	14.7083	15.2690	-3.84	3.67
60	13.6400	14.1799	14.7154	-3.81	3.64
61	13.1573	13.6730	14.1846	-3.77	3.61
62	12.6941	13.1868	13.6756	-3.74	3.57
63	12.2494	12.7202	13.1872	-3.70	3.54
64	11.8224	12.2723	12.7186	-3.67	3.51
65	11.4124	11.8424	12.2690	-3.63	3.48
66	11.0185	11.4295	11.8373	-3.60	3.45
67	10.6401	11.0331	11.4230	-3.56	3.41
68	10.2765	10.6522	11.0251	-3.53	3.38
69	9.9271	10.2863	10.6429	-3.49	3.35
70	9.5912	9.9348	10.2756	-3.46	3.32
71	9.2682	9.5968	9.9231	-3.42	3.29
72	8.9576	9.2720	9.5841	-3.39	3.26
73	8.6589	8.9597	9.2583	-3.36	3.23
74	8.3716	8.6594	8.9451	-3.32	3.19
75	8.0951	8.3705	8.6440	-3.29	3.16
76	7.8290	8.0926	8.3544	-3.26	3.13
77	7.5730	7.8252	8.0758	-3.22	3.10
78	7.3264	7.5679	7.8078	-3.19	3.07
79	7.0891	7.3202	7.5499	-3.16	3.04
80	6.8605	7.0818	7.3018	-3.12	3.01
81	6.6403	6.8522	7.0629	-3.09	2.98
82	6.4282	6.6311	6.8329	-3.06	2.95
83	6.2239	6.4182	6.6115	-3.03	2.92
84	6.0269	6.2131	6.3982	-3.00	2.89
85	5.8371	6.0154	6.1928	-2.96	2.86
86	5.6542	5.8249	5.9949	-2.93	2.84
87	5.4777	5.6413	5.8042	-2.90	2.81
88	5.3076	5.4644	5.6205	-2.87	2.78
89	5.1435	5.2937	5.4433	-2.84	2.75
90	4.9853	5.1292	5.2726	-2.81	2.72
91	4.8326	4.9705	5.1079	-2.77	2.69
92	4.6852	4.8174	4.9492	-2.74	2.66
93	4.5430	4.6697	4.7960	-2.71	2.63
94	4.4058	4.5272	4.6483	-2.68	2.61
95	4.2733	4.3896	4.5058	-2.65	2.58

5. ELECTRICAL DATA

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
96	4.1453	4.2568	4.3683	-2.62	2.55
97	4.0218	4.1287	4.2355	-2.59	2.52
98	3.9024	4.0049	4.1074	-2.56	2.50
99	3.7872	3.8854	3.9837	-2.53	2.47
100	3.6758	3.7700	3.8643	-2.50	2.44
101	3.5661	3.6585	3.7512	-2.53	2.47
102	3.4601	3.5509	3.6419	-2.56	2.50
103	3.3577	3.4468	3.5362	-2.59	2.53
104	3.2588	3.3463	3.4341	-2.61	2.56
105	3.1632	3.2491	3.3353	-2.64	2.58
106	3.0708	3.1551	3.2398	-2.67	2.61
107	2.9816	3.0643	3.1475	-2.70	2.64
108	2.8953	2.9765	3.0582	-2.73	2.67
109	2.8118	2.8915	2.9717	-2.76	2.70
110	2.7311	2.8093	2.8881	-2.78	2.73
111	2.6531	2.7299	2.8072	-2.81	2.75
112	2.5776	2.6530	2.7289	-2.84	2.78
113	2.5046	2.5785	2.6531	-2.87	2.81
114	2.4340	2.5065	2.5798	-2.89	2.84
115	2.3656	2.4368	2.5087	-2.92	2.87
116	2.2995	2.3693	2.4400	-2.95	2.90
117	2.2354	2.3040	2.3733	-2.98	2.92
118	2.1734	2.2407	2.3088	-3.00	2.95
119	2.1134	2.1795	2.2463	-3.03	2.97
120	2.0553	2.1201	2.1858	-3.06	3.01
121	1.9991	2.0626	2.1271	-3.08	3.03
122	1.9446	2.0070	2.0702	-3.11	3.05
123	1.8918	1.9530	2.0151	-3.13	3.08
124	1.8406	1.9007	1.9617	-3.16	3.11
125	1.7911	1.8500	1.9099	-3.18	3.14
126	1.7430	1.8009	1.8597	-3.22	3.16
127	1.6965	1.7533	1.8110	-3.24	3.19
128	1.6514	1.7071	1.7638	-3.26	3.21
129	1.6076	1.6623	1.7180	-3.29	3.24
130	1.5652	1.6189	1.6736	-3.32	3.27

5. ELECTRICAL DATA

2. THE PARAMETER OF THE OTHER SENSOR IN INDOOR AND OUTDOOR UNIT:（R_0=15K±2%; B0/100=3450K±2%）

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
-30	60.78	64.77	68.99	-6.16	6.12
-29	57.75	61.36	65.16	-5.88	5.83
-28	54.89	58.15	61.58	-5.61	5.57
-27	52.19	55.14	58.23	-5.35	5.31
-26	49.63	52.30	55.08	-5.11	5.05
-25	47.21	49.62	52.13	-4.86	4.81
-24	44.92	47.10	49.37	-4.63	4.60
-23	42.76	44.73	46.78	-4.40	4.38
-22	40.71	42.49	44.34	-4.19	4.17
-21	38.77	40.38	42.05	-3.99	3.97
-20	36.93	38.39	39.90	-3.80	3.78
-19	35.18	36.51	37.87	-3.64	3.59
-18	33.53	34.74	35.97	-3.48	3.42
-17	31.96	33.06	34.17	-3.33	3.25
-16	30.48	31.47	32.49	-3.15	3.14
-15	29.07	29.97	30.89	-3.00	2.98
-14	27.73	28.56	29.39	-2.91	2.82
-13	26.46	27.22	27.98	-2.79	2.72
-12	25.26	25.95	26.64	-2.66	2.59
-11	24.11	24.75	25.38	-2.59	2.48
-10	23.03	23.61	24.19	-2.46	2.40
-9	21.99	22.53	23.06	-2.40	2.30
-8	21.01	21.51	22.00	-2.32	2.23
-7	20.08	20.54	20.99	-2.24	2.14
-6	19.19	19.62	20.04	-2.19	2.10
-5	18.35	18.74	19.14	-2.08	2.09
-4	17.55	17.92	18.29	-2.06	2.02
-3	16.78	17.13	17.48	-2.04	2.00
-2	16.06	16.38	16.71	-1.95	1.97
-1	15.36	15.67	15.98	-1.98	1.94
0	14.70	15.00	15.29	-2.00	1.90
1	14.08	14.36	14.64	-1.95	1.91
2	13.48	13.75	14.02	-1.96	1.93
3	12.91	13.17	13.43	-1.97	1.94
4	12.36	12.62	12.87	-2.06	1.94
5	11.85	12.09	12.34	-1.99	2.03
6	11.35	11.59	11.83	-2.07	2.03
7	10.88	11.11	11.35	-2.07	2.11
8	10.43	10.66	10.89	-2.16	2.11
9	9.999	10.230	10.450	-2.26	2.11
10	9.590	9.816	10.040	-2.30	2.23

5. ELECTRICAL DATA

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
11	9.199	9.422	9.647	-2.37	2. 33
12	8.826	9.047	9.269	-2.44	2. 40
13	8.470	8.689	8.910	-2.52	2. 48
14	8.129	8.347	8.567	-2.61	2. 57
15	7.804	8.021	8.240	-2.71	2. 66
16	7.493	7.709	7.928	-2.80	2. 76
17	7.196	7.412	7.630	-2.91	2. 86
18	6.912	7.127	7.346	-3.02	2. 98
19	6.640	6.855	7.074	-3.14	3. 10
20	6.381	6.595	6.815	-3.24	3. 23
21	6.132	6.347	6.567	-3.39	3. 35
22	5.894	6.109	6.330	-3.52	3. 49
23	5.667	5.882	6.103	-3.66	3. 62
24	5.449	5.664	5.886	-3.80	3. 77
25	5.240	5.456	5.678	-3.96	3. 91
26	5.048	5.260	5.478	-4.03	3. 98
27	4.864	5.072	5.286	-4.10	4. 05
28	4.687	4.891	5.101	-4.17	4. 12
29	4.517	4.717	4.924	-4.24	4. 20
30	4.355	4.550	4.753	-4.29	4. 27
31	4.198	4.390	4.589	-4.37	4. 34
32	4.048	4.236	4.431	-4.44	4. 40
33	3.904	4.089	4.280	-4.52	4. 46
34	3.766	3.946	4.134	-4.56	4. 55
35	3.663	3.810	3.994	-3.86	4. 61
36	3.506	3.679	3.859	-4.70	4. 66
37	3.383	3.552	3.729	-4.76	4. 75
38	3.265	3.431	3.604	-4.84	4. 80
39	3.152	3.314	3.484	-4.89	4. 88
40	3.043	3.202	3.368	-4.97	4. 93
41	2.938	3.094	3.257	-5.04	5. 00
42	2.838	2.990	3.149	-5.08	5. 05
43	2.741	2.890	3.046	-5.16	5. 12
44	2.648	2.793	2.946	-5.19	5. 19
45	2.558	2.701	2.850	-5.29	5. 23
46	2.472	2.611	2.758	-5.32	5. 33
47	2.389	2.525	2.669	-5.39	5. 40
48	2.309	2.443	2.583	-5.49	5. 42
49	2.232	2.363	2.500	-5.54	5. 48
50	2.158	2.286	2.421	-5.60	5. 58
51	2.087	2.212	2.344	-5.65	5. 63
52	2.018	2.140	2.269	-5.70	5. 69
53	1.952	2.072	2.198	-5.79	5. 73

5. ELECTRICAL DATA

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
54	1.888	2.005	2.129	-5.84	5. 82
55	1.827	1.941	2.062	-5.87	5. 87
56	1.767	1.880	1.998	-6.01	5. 91
57	1.710	1.820	1.936	-6.04	5. 99
58	1.655	1.763	1.876	-6.13	6. 02
59	1.602	1.707	1.818	-6.15	6. 11
60	1.551	1.654	1.762	-6.23	6. 13
61	1.502	1.602	1.709	-6.24	6. 26
62	1.452	1.553	1.657	-6.50	6. 28
63	1.409	1.505	1.606	-6.38	6. 29
64	1.364	1.458	1.558	-6.45	6. 42
65	1.322	1.413	1.511	-6.44	6. 49
66	1.280	1.370	1.466	-6.57	6. 55
67	1.241	1.328	1.422	-6.55	6. 61
68	1.202	1.288	1.379	-6.68	6. 60
69	1.165	1.249	1.339	-6.73	6. 72
70	1.129	1.211	1.299	-6.77	6. 77
71	1.095	1.175	1.261	-6.81	6. 82
72	1.061	1.140	1.224	-6.93	6. 86
73	1.029	1.106	1.188	-6.96	6. 90
74	0.9977	1.073	1.153	-7.02	6. 94
75	0.9676	1.041	1.120	-7.05	7. 05
76	0.9385	1.011	1.088	-7.17	7. 08
77	0.9104	0.9810	1.056	-7.20	7. 10
78	0.8833	0.9523	1.026	-7.25	7. 18
79	0.8570	0.9246	0.9971	-7.31	7. 27
80	0.8316	0.8977	0.9687	-7.36	7. 33
81	0.8071	0.8717	0.9412	-7.41	7. 38
82	0.7834	0.8466	0.9146	-7.47	7. 43
83	0.7604	0.8223	0.8888	-7.53	7. 48
84	0.7382	0.7987	0.8639	-7.57	7. 55
85	0.7167	0.7759	0.8397	-7.63	7. 60
86	0.6958	0.7537	0.8161	-7.68	7. 65
87	0.6755	0.7322	0.7933	-7.74	7. 70
88	0.6560	0.7114	0.7712	-7.79	7. 75
89	0.6371	0.6913	0.7498	-7.84	7. 80
90	0.6188	0.6718	0.7291	-7.89	7. 86
91	0.6011	0.6530	0.7051	-7.95	7. 39
92	0.5840	0.6348	0.6897	-8.00	7. 96
93	0.5674	0.6171	0.6709	-8.05	8. 02
94	0.5514	0.6000	0.6527	-8.10	8. 07
95	0.5359	0.5835	0.6350	-8.16	8. 11
96	0.5209	0.5675	0.6179	-8.21	8. 16

5. ELECTRICAL DATA

T [℃]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]	DR(MIN)%	DR(MAX)%
97	0.5064	0.5519	0.6014	-8.24	8. 23
98	0.4923	0.5369	0.5853	-8.31	8. 27
99	0.4787	0.5224	0.5698	-8.37	8. 32
100	0.4655	0.5083	0.5547	-8.42	8. 36
101	0.4528	0.4946	0.5401	-8.45	8. 42
102	0.4404	0.4814	0.5259	-8.52	8. 46
103	0.4284	0.4685	0.5121	-8.56	8. 51
104	0.4168	0.4561	0.4988	-8.62	8. 56
105	0.4056	0.4440	0.4859	-8.65	8. 62
106	0. 3947	0. 4323	0. 4733	−8. 70	8. 66
107	0. 3841	0. 4210	0. 4611	−8. 76	8. 70
108	0. 3739	0. 4100	0. 4493	−8. 80	8. 75
109	0. 3640	0. 3993	0. 4379	−8. 84	8. 81
110	0. 3544	0. 3890	0. 4267	−8. 89	8. 84
111	0. 3450	0. 3789	0. 4159	−8. 95	8. 90
112	0. 3360	0. 3692	0. 4055	−8. 99	8. 95
113	0. 3272	0. 3597	0. 3953	−9. 04	9. 01
114	0. 3187	0. 3505	0. 3854	−9. 07	9. 06
115	0. 3104	0. 3416	0. 3758	−9. 13	9. 10
116	0. 3024	0. 3330	0. 3665	−9. 19	9. 14
117	0. 2947	0. 3246	0. 3574	−9. 21	9. 18
118	0. 2871	0. 3164	0. 3468	−9. 26	8. 77
119	0. 2798	0. 3085	0. 3401	−9. 30	9. 29
120	0. 2727	0. 3008	0. 33	−9. 34	9. 34

6. CONTROL MODEL

6-1 Indoor control mode

1.Major general technical parameters

1 Conditionings for operation: Ambient temperatures: (-15 - +45 ℃),

relative humidity (45 - 85%).

2 Remote receiver distance: 8 m.

3 Remote receiver angle: Less than 80 degrees.

4 Temperature control accuracy: ±1℃.

5 Time error: Less than 1%.

6 The power supply for the air conditioner :

18k&24k&36K:

a.c 220V ~ 240V, 50Hz, with its fluctuation in the range of (198V – 253 V).

48K&60K:

AC 380V-415V 3N ~ /50Hz, with its fluctuation in the range of (305V-438V).

2. Functions of the controller

Control function

3.1 Emergency switch

Press the emergency button can realize the starting or closing Machine, starting up according to the automatic mode of operation.

3.2 Operator-machine communication

Air conditioning and remote controller is provided with a temperature sensor. The remote controller on the temperature sensor to detect the default settings of room temperature at room temperature. If the indoor control unit for long time have not received remote control signal, will automatically switch to the air conditioner body temperature sensor.

3.3 Timer function

1. Timer on: When set to start in a time by the remote controller, the air conditioner starts in the timer on condition. When the set time is up, the air conditioner will turn on and operates in the preset conditions after receiving a signal from the remote controller. If the air

conditioner has not received a signal from the remote controller when the set time is up, it will automatically start and operate in the preset conditions.

2. Timer off: When set to stop in a set time by the remote controller, the air conditioner will start in the timer off condition. When the set time is up, the air conditioner will turn off after receiving a signal from the remote controller. If the air conditioner has not received a signal from the remote controller when the set time is up, it will turn off automatically.

3. Neither the turning on nor turning off operation will cancel the timer function。

3.4 Sleep

1. In the heating, cooling or dehumidifying mode, press the “Sleep” button on the remote controller to start or cancel the sleep function in turn, and at the same time the sleep icon on the display screen will be on or off accordingly.

2. In the heating mode, the set temperature will decrease automatically after the sleep function is started.

3. In the cooling mode, the set temperature will rise automatically after the sleep function is started.

4. In default, the setting is to cancel the sleep function. Turning off the unit will also cancel the sleep function.

3.5 High efficient run function

In Cool, Dehumidification, Fan mode, press the "SUPER " to enter the refrigeration mode, set the temperature automatically adjust to 18℃; the Fan speed is powerful speed; frequency of high frequency operation.

In the heating mode, powerful function is invalid for H1 wireless remote controller.

3.6 mute function (only for H1 wireless remote controller)

In the indoor machine operation mode，You may turn on mute function and turn off mute function by mute key, The air conditioner will run by mute fan speed in mute mode

3.7 prevent cooling wind mode

6. CONTROL MODEL

In the heating-run, to prevent the indoor fan from blowing cold air, the indoor fan will stop or run slowly until the coil is warmth.

3.8 blow waste heating and waste cooling function

The heating mode, remote shutdown, such as indoor heat exchanger temperature is higher, the wind blowing out opportunities continue to run the waste heat.

Cool and dehumidification mode , after the compressor close, indoor machine will continue to set the speed of operation for a period of time.

3.9 automatically model

This model does not automatically model function, emergency button cannot set the automatic mode of operation, can use the emergency switch shutdown, remote setting the automatic mode of indoor machine with remote signal.

3.10 Dehumidifying method:

Remote control setting dehumidifying mode, indoor machine forced to run at low speed（high power key or a strong bond also maintain a low wind speed）, the outdoor machine according to the refrigeration mode operation.

3.11 Fault display

If the product operation failure, outdoor and indoor display control panel lights will quote fault.

6. CONTROL MODEL

6-2　Outdoor mode control

Summarization

1.1

18k、24k、36K

1. Voltage scale: 176V ~ 253V，50Hz

2. Storage temperature scale: -40℃ ~ 85℃

3. Storage humidity scale: PH30% ~ PH95%

4. Working temperature:-20℃ ~ 85℃

5. accuracy for temperature control： ±0.5℃

1.2

48 k、60k

1. Voltage scale: 305V ~ 438V，50Hz

2. Storage temperature scale: -40℃ ~ 85℃

3. Storage humidity scale: PH30% ~ PH95%

4. Working temperature:-20℃ ~ 85℃

5. accuracy for temperature control： ±0.5℃

2．Control function

6. CONTROL MODEL

2.1Cooling Anti-freeze Protection

To prevent indoor air conditioner evaporator temperature is too low, the indoor coil sensor for real time detection of evaporator. If the indoor coil temperature is too low, the compressor will protect.

2.2 Overload Protection

Air can heat exchanger temperature sensor for monitoring, when the sensor when the temperature is too high, the compressor will be automatic protection

2.3 Exhaust temperature protection

To prevent deterioration due to high exhaust temperature of compressor, the machine will realize the real-time detection of the temperature of exhaust gas. If the temperature is too high compressor automatic protection

2.4 Oil-return Control

When the compressor runs for a long time low frequencies, control system will start the return oil program. The system in the oil return to the compressor.

2.5Operation Mode

Air conditioning mode is the operation mode set by users through remote controller, four modes are available: cooling, heating, dehumidification, as well as fan mode.

2.6 Four-way Valve Control

Four-way valve of the outdoor machine shuts down when cooling and defrosting but starts when heating. During the heating process, the four way valve to stop working for a period of time after compressor disconnect.

2.7 Start-up Protection:

6. CONTROL MODEL

To prevent compressor from restart frequently in the condition that system pressure has not been completely balanced, it can’t be restarted within 3 minutes.

2.8 Pressure Protection:

When the pressure increases to a preset value, the pressure switch will automatically protect. Compressor will stop and report the fault code protection.

7. TROUBLE SHOOTING

7-1- Error code

When the air conditioner failure occurs, the fault code will displays on outdoor control board , wire remote controller or display panel.

1. INDOOR UNINT FAULT CODE DISPLAY

WALL MOUNTED TYPE

Run the air-conditioner by wireless remote controller , continue pressing the“SLEEP ”button for 4 times, fault codes will flashing rapidly on the LCD . If no fault ,"00" will display.

“ER”shows indoor display panel Communication fault with indoor unit control board .

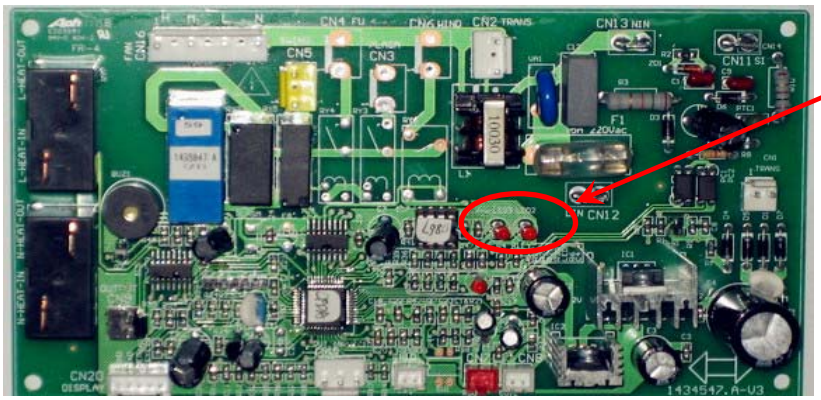
FLOOR STANDING TYPE

In the case of no button-locked,continue pressing “CLOCK”button for 8 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

Continue pressing “SLEEP”button of wireless remote controller for 8 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

Check indoor unit control board---FAILURE LAMP

LED3 and LED2 indicates fault codes: LED2 indicate ten fault code, LED3 indicate bits fault code (as shown fig. below).



LED2 and LED3 are failure indicate lamps,
LED2 indicate fault code ten digit number, LED3 indicate single digit number code

“ER”shows indoor display panel Communication fault with indoor unit control board

7. TROUBLE SHOOTING

DUCT TYPE AND CASSETTE TYPE

(1) ERROR CODES INDICATED BY WIRE REMOTE CONTROLLER(see fig. below)

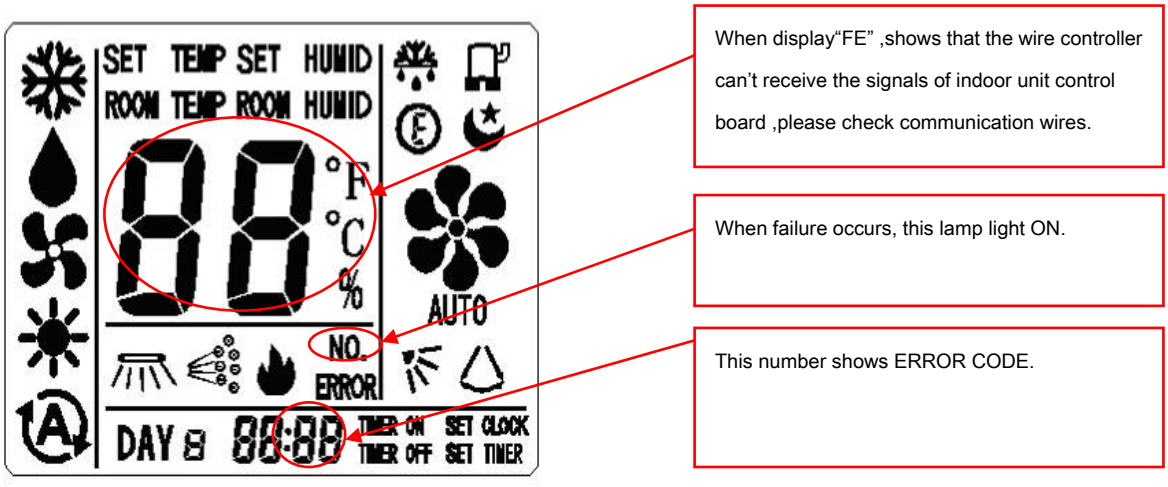


FIG.2 ERROR CODE DISPLAY ON WIRE REMOT CONTROLLER

（2）WITH DISPLAY PANEL(CASSETTE type and CEILING &FLOOR type)

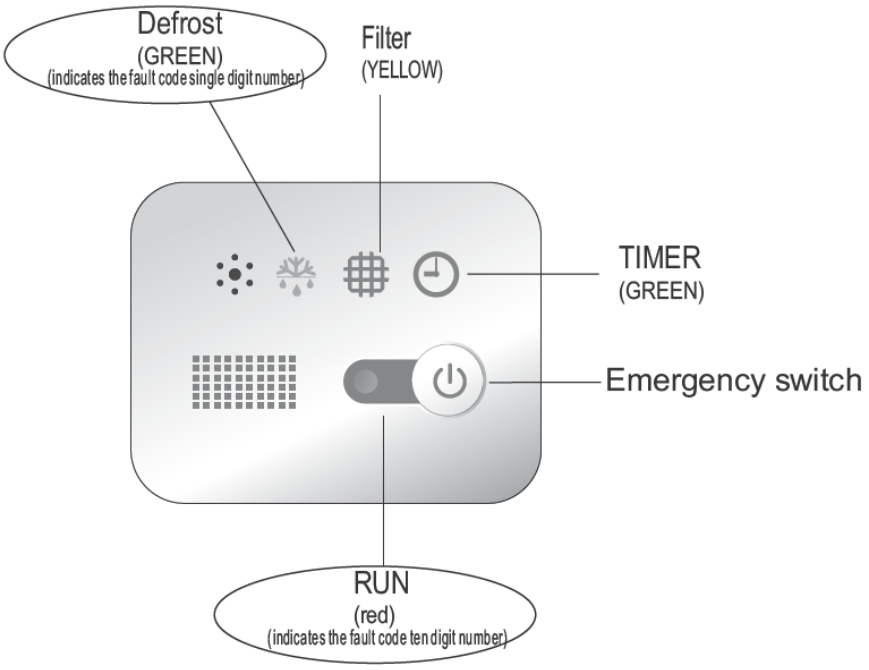
Lamp RUN(LED2 ,red) and Lamp DEFROST（LED5 ,green）flashing，Lamp RUN display fault code ten digit number, lamp DEFROST display fault code single digit number (as shown fig. below).

For example，fault code 36： led RUN & defrost flash 3 times at the same time, and led DEFROST continue flash 3 times, reports No. 36 fault.

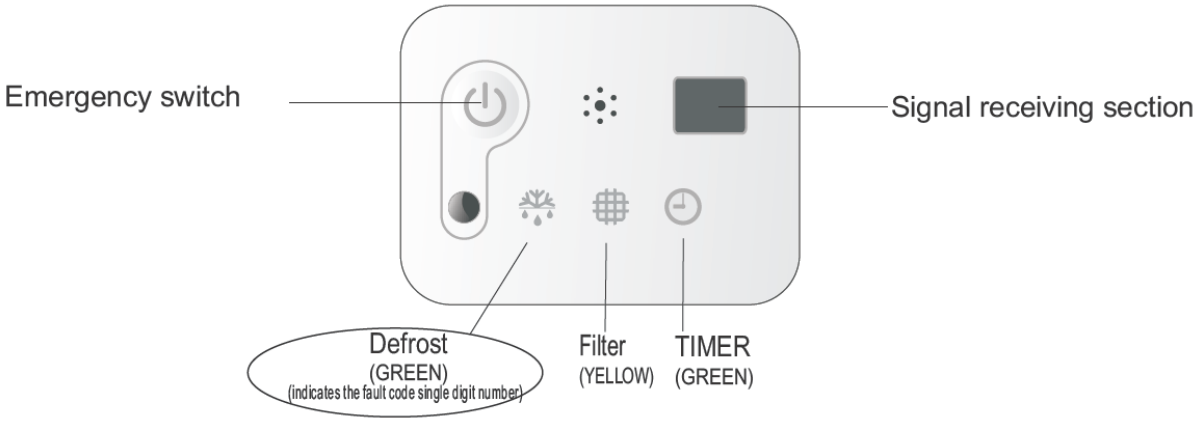
7. TROUBLE SHOOTING

CASSETTE TYPE

Display Panel-12K,18K



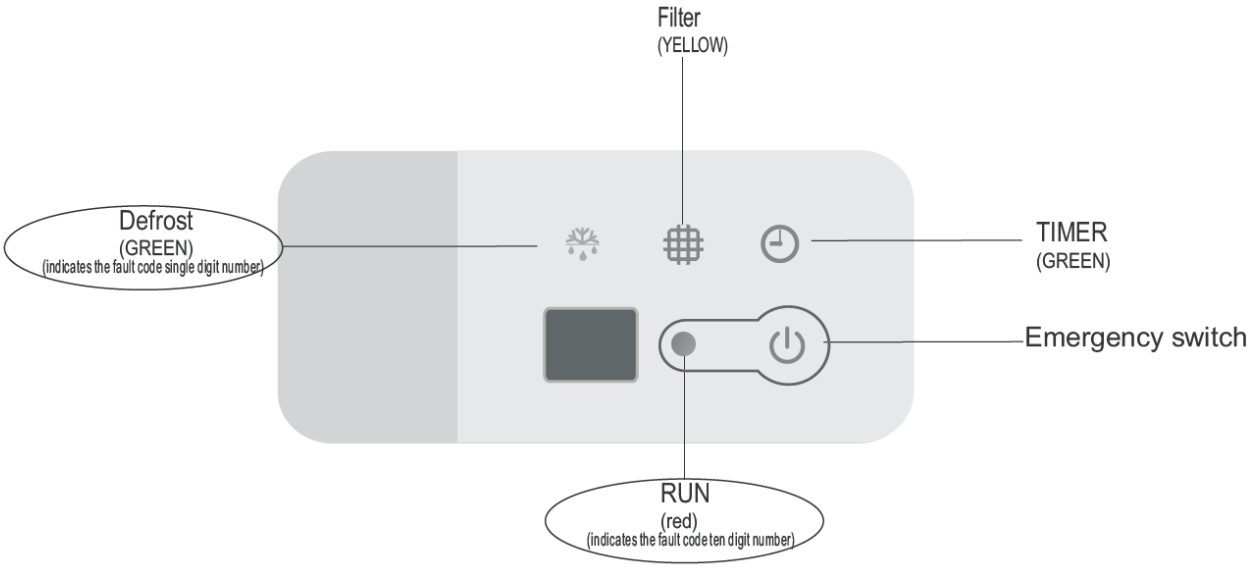
Display Panel-24K,36K,48K



7. TROUBLE SHOOTING

CEILING & FLOOR TYPE

Display Panel



LED FALSH CONTROL：flash 300mS(T1)，off 300mS(T2)，after 2000mS(T3)fault code repeat displays. (as shown below)

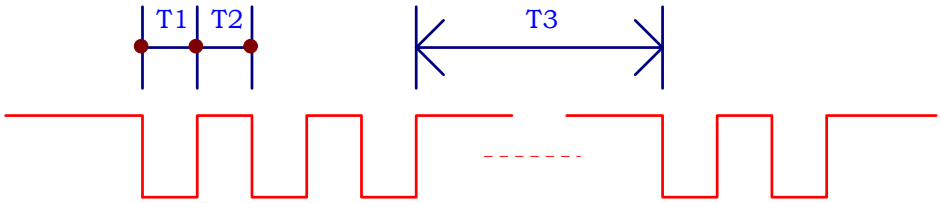
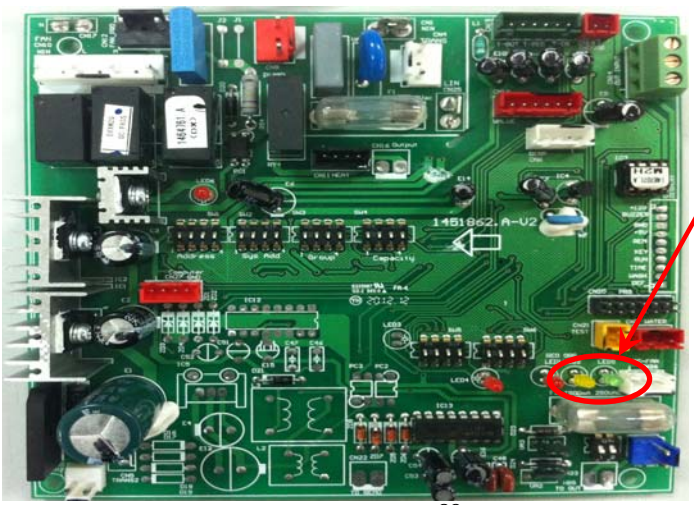


Fig.2 LED FALSH CONTROL

3.Duct type indoor units of VRF---FAULT CODE DISPLAY BY INDOOR BOARD



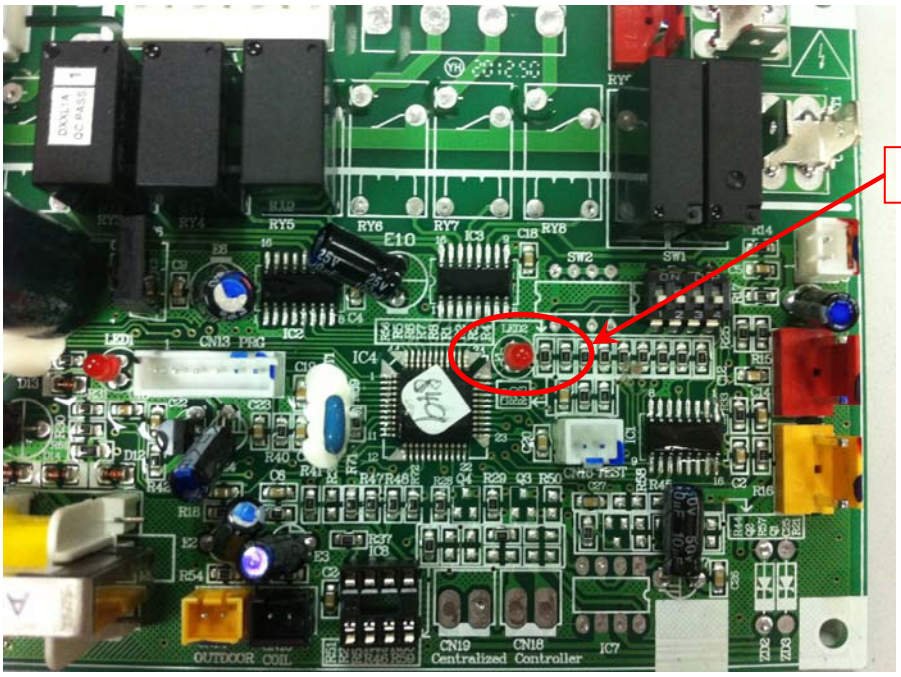
LED2 and LED5 are failure indicate lamps,
LED2(RED) indicate fault code ten digit number, LED5(GREEN) indicate single digit number code

7. TROUBLE SHOOTING

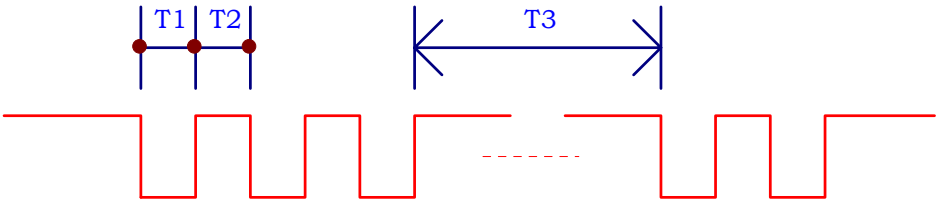
2.OUTDOOR UNINT FAULT CODE DISPLAY

（1） ON/OFF UNITARY TYPE（equipped with outdoor control box）

Fault code display by indicate lamps of outdoor control board.



LED FALSH CONTROL：flash 300mS(T1)，off 300mS(T2)，after 900mS(T3)fault code repeat displays. (as shown below)



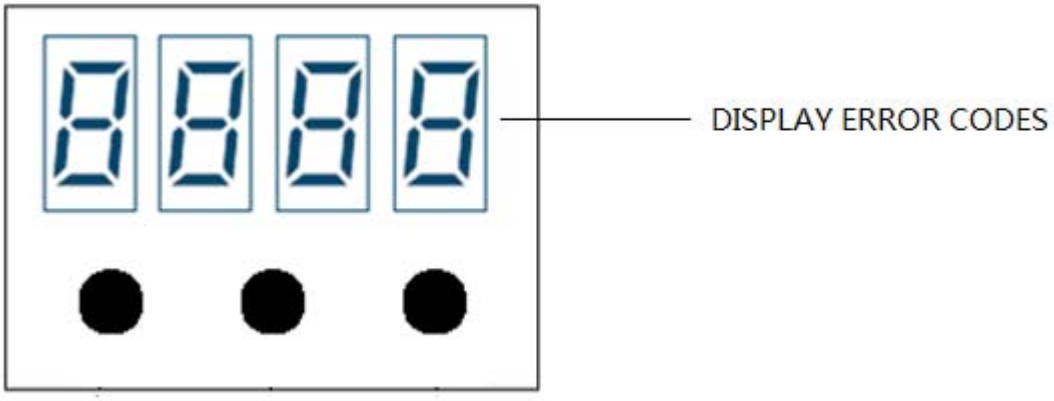
（ 2 ） INVERTER UNITARY AIR CONDITONER , MULTI-SPLIT TYPE AIR CONDITONER&VRF：

Fault code will display on digital indication board.

✧ VRF：

Indoor unit can indicate both indoor failure and outdoor failure ,but outdoor only indicate outdoor’s.

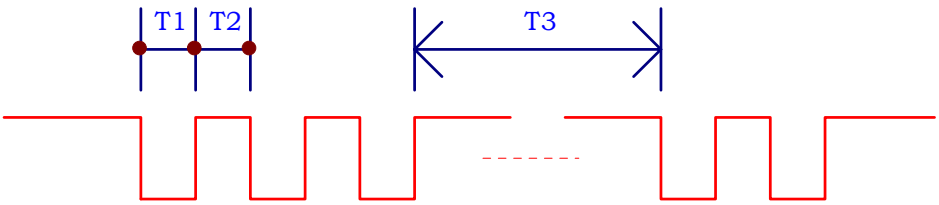
7. TROUBLE SHOOTING



3.Fault code display (Driver Board)

Fault code display by indicate lamps of outdoor driver board.

LED FALSH CONTROL：flash 200mS(T1)，off 200mS(T2)，after 900mS(T3)fault code repeat displays. (as shown below)



7. TROUBLE SHOOTING

The following is the fault code table of outdoor.

Fault code	Fault description	Fault description	REMARKS
1	Outdoor environment temperature sensor fault	Outdoor environment temperature sensor short circuit or open circuit	
2	The outdoor coil sensor fault	The outdoor coil temperature sensor short circuit or open circuit	
3	Current protective device		
4	EEprom Data error	EEprom Data error or EE chip fault	
5	Refrigeration and freezing or thermal overload protection	Refrigeration indoor coil temperature is too low or heating the indoor coil temperature too high	
6	AC motor fault		
7	Indoor and outdoor communication fault	Outdoor continuously for 2 minutes without receipt of indoor communication data	
8	Phase current imbalance		Application of three-phase power supply models
9	Current U phase		Application of three-phase power supply models
10	Current V phase		Application of three-phase power supply models
11	Sequence error	Three phase power supply wiring line sequence error	Application of three-phase power supply models
12	Phase detection phase		Application of three-phase power supply models
13	Compressor overheat protection device	Compressor overheating protector tripping	
14	High voltage switch motor protection/Pressure shutdown protection	Too high system pressure leads to high pressure switch tripping or pressure sensors to detect the pressure too high to achieve shutdown protection pressure	Were applied to have high pressure switch or a pressure sensor type
15	Low voltage switch protection/Low pressure protection shutdown	System low pressure causing low pressure switch tripping or pressure sensors to detect the pressure is too low to achieve the shutdown	Were applied to the low pressure switch or a pressure sensor type

7. TROUBLE SHOOTING

Fault code	Fault description	Fault description	REMARKS
		protection pressure	
16	Refrigeration overload protection	The outdoor coil temperature is too high to reach refrigeration temperature shutdown protection	
17	Exhaust temperature sensor fault	Exhaust temperature sensor short circuit or open circuit	
18	AC voltage of high and low voltage protection / fault	Power input AC voltage is too low or too high	MUTI-SPLIT TYPE ONLY
19	Intake air temperature sensor fault	Exhaust temperature sensor short circuit or open circuit	
20	Condenser entrance temperature sensor fault	Condenser entrance temperature sensor short circuit or open circuit	
21	The outlet of the condenser temperature sensor fault	The outlet of the condenser temperature sensor short circuit or open circuit	
22	The defrosting sensor fault	The outlet of the condenser temperature sensor short circuit or open circuit	
23	Expansion valve A tube sensor fault	Expansion valve A tube sensor short circuit or open circuit	FOR MUTI-SPLIT&Inverter unitary types
24	Expansion valve B tube sensor fault	Expansion valve B tube sensor short circuit or open circuit	FOR MUTI-SPLIT outdoor
25	Expansion valve C tube sensor fault	Expansion valve C tube sensor short circuit or open circuit	FOR MUTI-SPLIT outdoor
26	Expansion valve D tube sensor fault	Expansion valve D tube sensor short circuit or open circuit	FOR MUTI-SPLIT outdoor
27	Expansion valve A thick pipe sensor fault	Expansion valve A thick pipe sensor short circuit or open circuit	FOR MUTI-SPLIT &inverter unitary types
28	Expansion valve B thick pipe sensor fault	Expansion valve B thick pipe sensor short circuit or open circuit	FOR MUTI-SPLIT outdoor
29	Expansion valve C thick pipe sensor fault	Expansion valve C thick pipe sensor short circuit or open circuit	FOR MUTI-SPLIT outdoor

7. TROUBLE SHOOTING

Fault code	Fault description	Fault description	REMARKS
30	Expansion valve D thick pipe sensor fault	Expansion valve D thick pipe sensor short circuit or open circuit	FOR MUTI-SPLIT outdoor
31	High discharge pressure fault		VRF outdoor
32	Low suction pressure fault		VRF outdoor
41	Current sensor fault		Application of three-phase power supply ON/OFF TYPES
42	Voltage sensor fault		
43	H Pressure sensor fault		VRF
44	L Pressure sensor fault		
45	IPM fault		
46	IPM Communication fault		
47	Too high exhaust temperature shutdown		
48	Outdoor DC fan fault		
49	Outdoor DC fan fault		
90	Forced expansion valve		
91	IPM Temperature rise too high downtime		
92	Compression ratio is too large to stop		VRF TYPES
93	The machine number and set the number of inconsistencies fault		VRF
94	outdoor address conflict		VRF
95	Refrigerant serious excessive downtime		VRF
96	Refrigerant shortage downtime		VRF
97	Four way valve fault		FOR VRF&inverter unitary types

7. TROUBLE SHOOTING

The following is the fault code table of indoor.

FAULT CODE	FAULT DISCRIPTION	REMARKS
31	Panel key ADfault	Only for MUTI-SPLIT
32	The front panel fault is not in place (two upper and lower position detecting switch and also put in place or not in place)	Only for MUTI-SPLIT
33	Room Temperature Sensor Fault	Only for MUTI-SPLIT
34	Coil Temperature Sensor Fault	Only for MUTI-SPLIT
35	Panel drive fault (two upper and lower panel position detection switch is not in accordance with thereservation timing action)	Only for MUTI-SPLIT
36	Communication between Indoor and Outdoor Fault	Only for MUTI-SPLIT
37	humidity sensor failure	Only for MUTI-SPLIT
38	EEprom Data error	Only for MUTI-SPLIT
39	Indoor Fan Motor Fault	Only for MUTI-SPLIT
40	Grid protection	Only for MUTI-SPLIT
51	Drainage Fault	
52	Grid protection	
53	The front panel fault is not in place (two upper and lower position detecting switch and also put in place or not in place)	
55	Conflict Model Fault	ONLY FOR MUTI-SPLIT & VRF TYPES
56	Freeze Protection	
57	Overload Protection	
61	Indoor address duplication	For VRF
62	Remote address duplication	For VRF
64	Communication between Indoor & Outdoor unit Fault	
65	Communication between Indoor &Wiring remote controller Fault	For VRF
71	The indoor zero crossing detection fault	
72	Indoor Fan Motor Fault	
73	EEPROM Data Error	
74	Panel drive fault (two upper and lower panel position detection switch is not in accordance with there servation timing action)	
80	Panel key fault	
81	Ambient Temperature Sensor Fault	
82	Evaporator Inlet Temperature Sensor Fault	
83	Evaporator Middle TemperatureSensor Fault	
84	Evaporator outlet Temperature Sensor Fault	
85	Wiring Remote Controller Sensor Fault	

86	Outlet temperature sensor fault	
87	The water side entrance temperature sensor fault	
88	The water side entrance temperature sensor fault	
89	Humidity sensor failure	
FE	Communication between main control board &Wiring remote controller Fault (display on wiring remote controller)	
ER	Communication between main control board &display board Fault (displays on display board)	

8. CHECKING COMPONENTS

8-1. Check refrigerant system

TEST SYSTEM FLOW

Conditions: ① Compressor is running.

② The air condition should be installed in good ventilation.

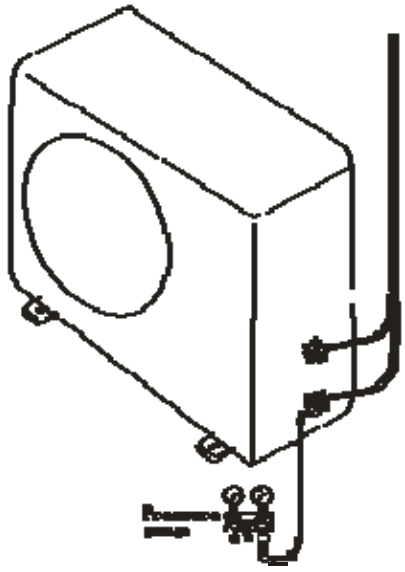
Tool: Pressure Gauge

Technique: ① see ② feel ③ test

SEE ----- Tube defrost.

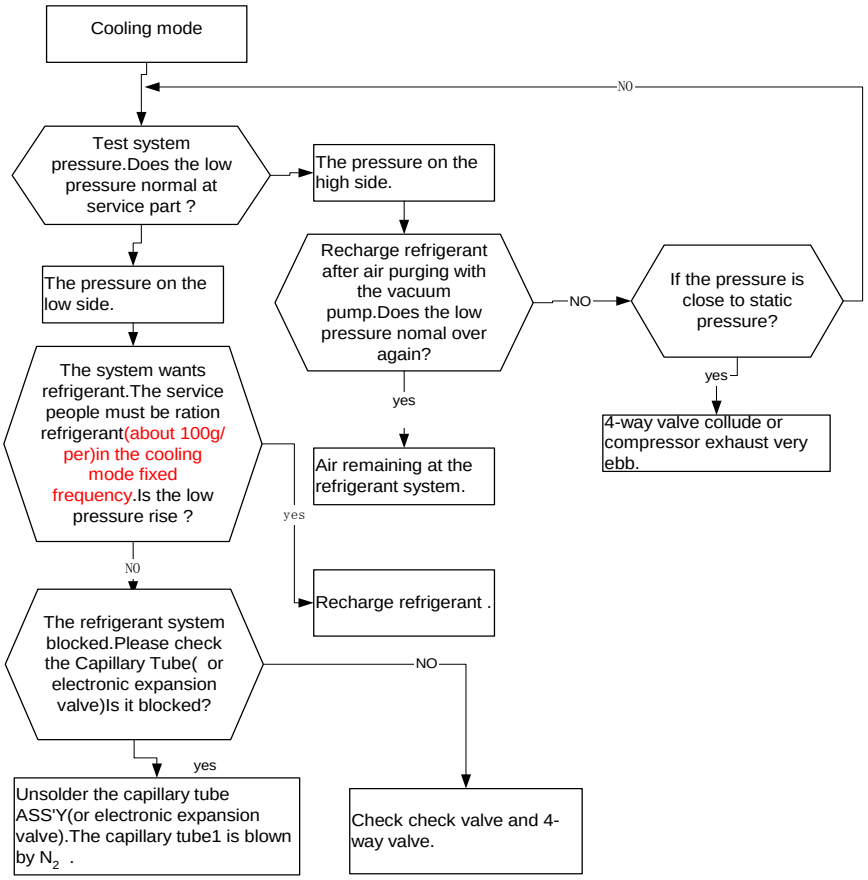
FEEL ----- The difference between tube's temperature.

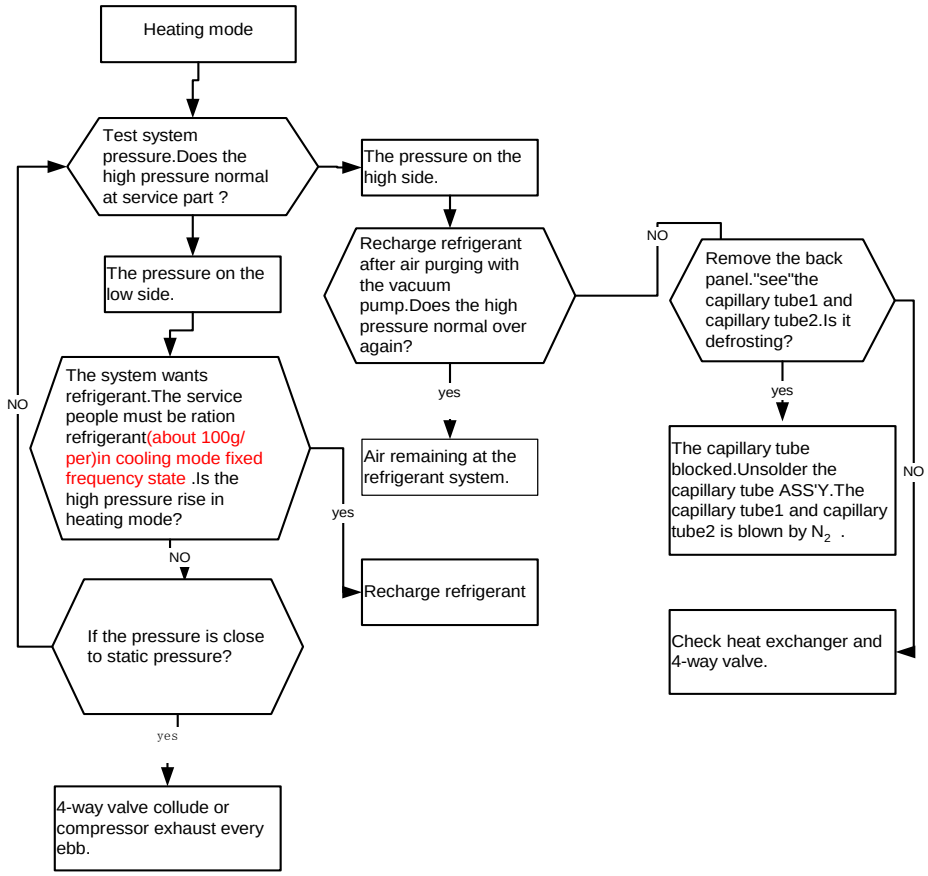
TEST ----- Test pressure.



8. CHECKING COMPONENTS

Test system flow


Cooling mode
NO
Test system pressure.Does the low pressure normal at service part ?
The pressure on the high side.
The pressure on the low side.
Recharge refrigerant after air purging with the vacuum pump.Does the low pressure nomal over again?
NO
If the pressure is close to static pressure?
yes
4-way valve collude or compressor exhaust very ebb.
yes
Air remaining at the refrigerant system.
The system wants refrigerant.The service people must be ration refrigerant(about 100g/ per)in the cooling mode fixed frequency.Is the low pressure rise ?
yes
Recharge refrigerant .
NO
The refrigerant system blocked.Please check the Capillary Tube(or electronic expansion valve)Is it blocked?
NO
yes
Unsolder the capillary tube ASS'Y(or electronic expansion valve).The capillary tube1 is blown by N_2 .
Check check valve and 4-way valve.


Heating mode
Test system pressure.Does the high pressure normal at service part ?
The pressure on the high side.
The pressure on the low side.
Recharge refrigerant after air purging with the vacuum pump.Does the high pressure normal over again?
NO
Remove the back panel."see"the capillary tube1 and capillary tube2.Is it defrosting?
yes
The system wants refrigerant.The service people must be ration refrigerant(about 100g/ per)in cooling mode fixed frequency state .Is the high pressure rise in heating mode?
NO
yes
Air remaining at the refrigerant system.
Recharge refrigerant
NO
If the pressure is close to static pressure?
yes
The capillary tube blocked.Unsolder the capillary tube ASS'Y.The capillary tube1 and capillary tube2 is blown by N_2 .
NO
Check heat exchanger and 4-way valve.
4-way valve collude or compressor exhaust every ebb.

8. CHECKING COMPONENTS

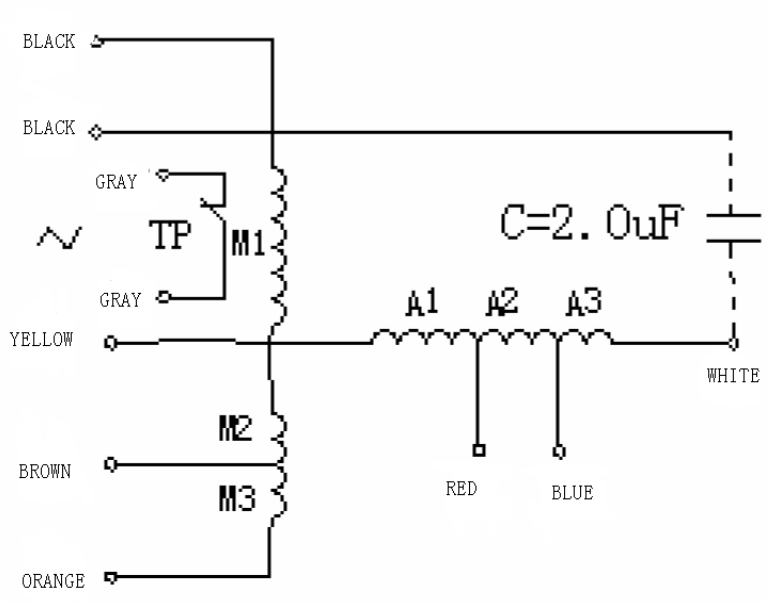
8-2.Check parts unit

1. INDOOR FAN MOTOR

Duct type

18K

YSK110-40-4-A (HS16)

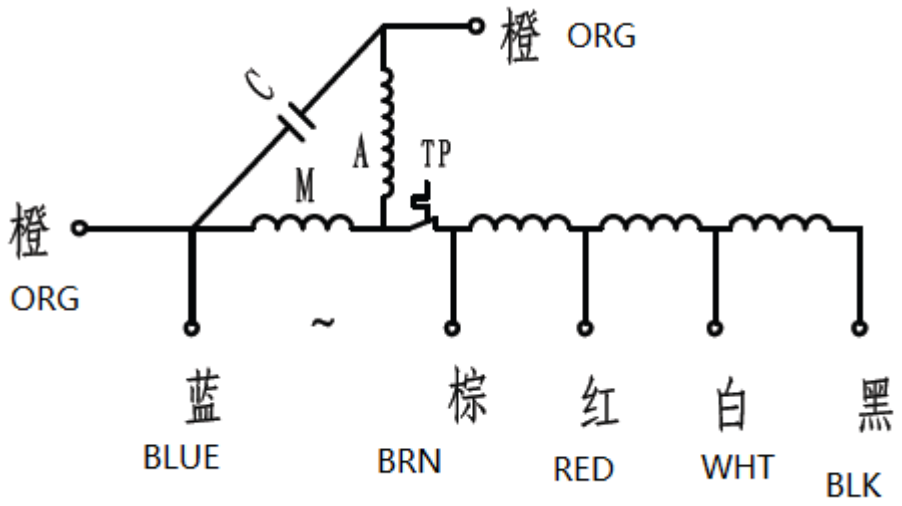


M1:146±15%Ω
M2: 33±15%Ω
M3: 43±15%Ω
A1: 63±15%Ω
A2: 23±15%Ω
A3: 119±15%Ω

8. CHECKING COMPONENTS

AUD-24UX4SLH

Y6S419C56



BROWN-BLUE	70.1 [Ω]	± 12%
BROWN-ORANGE	75.5 [Ω]	± 12%
BROWN-RED	10.3 [Ω]	± 12%
RED-WHITE	11.4 [Ω]	± 12%
WHITE-BLACK	16.1 [Ω]	± 12%

AUD-24UX4SLH1

DC MOTOR

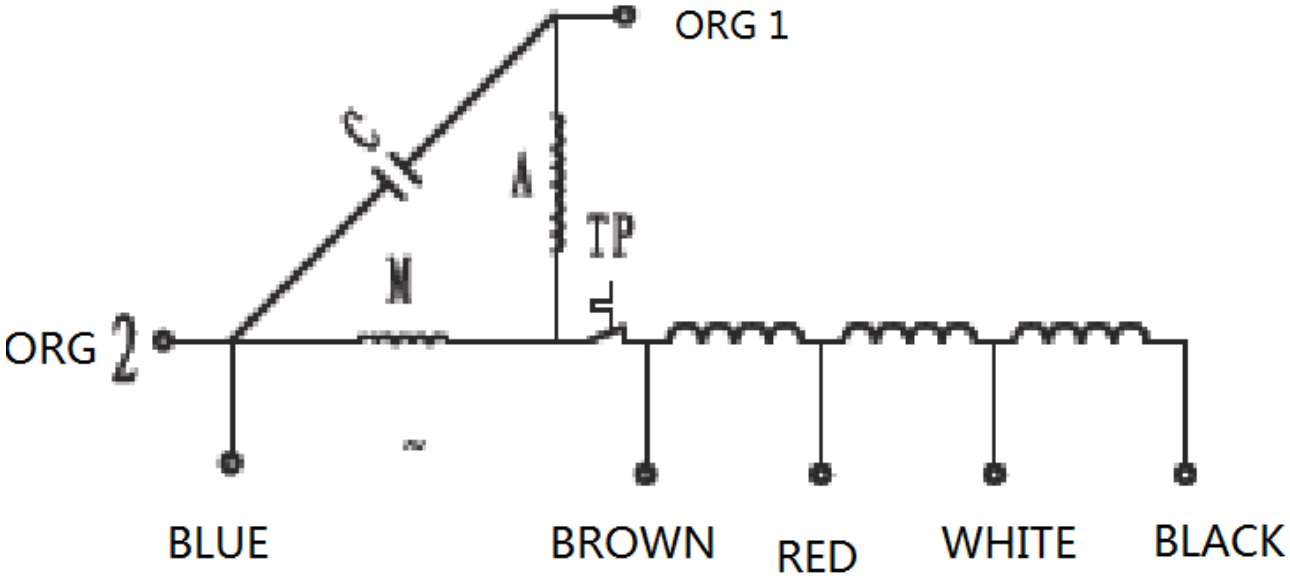
AUD-36UX4SMH1

DC MOTOR

8. CHECKING COMPONENTS

AUD-36UX4SMH

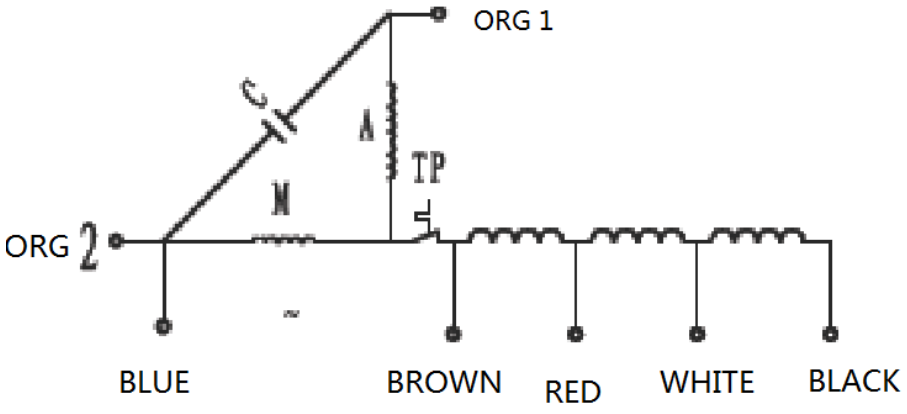
Y7S423C024



M	23.78 [Ω] ±12%
A	21.48 [Ω] ±12%
BROWN-RED	5.15 [Ω] ±12%
RED-WHITE	2.66 [Ω] ±12%
WHITE-BLACK	5.07 [Ω] ±12%

8. CHECKING COMPONENTS

48K,60K

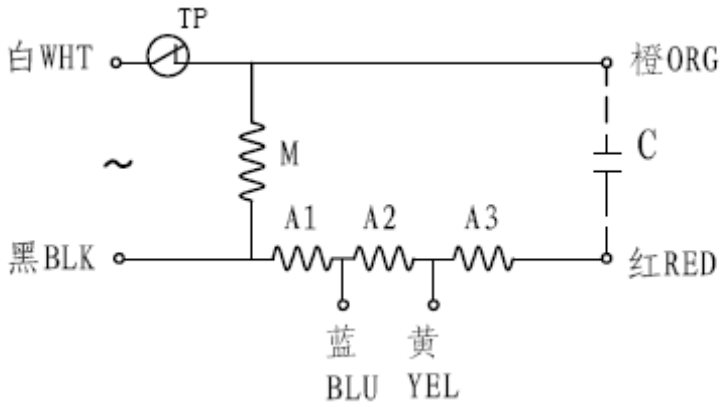


M	17.89 [Ω] ±12%
A	27.2 [Ω] ±12%
BROWN-RED	3.35 [Ω] ±12%
RED-WHITE	4.77 [Ω] ±12%
WHITE-BLACK	2.72 [Ω] ±12%

8. CHECKING COMPONENTS

Cassette

18k



25℃

M 240[Ω] ±15%

A1 60 [Ω] ±15% ; A2 33[Ω] ±15% ;

A3 143[Ω] ±15% ;

24K,36K,48K,60K

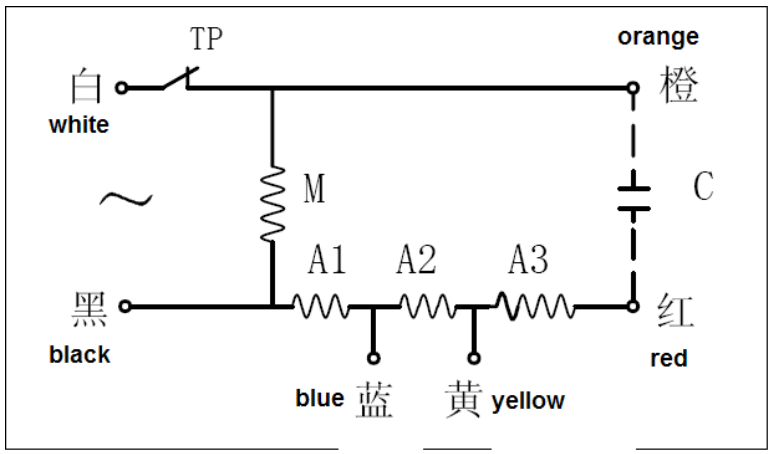
DC-MOTOR

8. CHECKING COMPONENTS

Ceiling & Floor type

18K

YSK110-22-4-A



M: 187Ω A1：37.5Ω A2：27.8Ω A3：146Ω

24K-- DC MOTOR

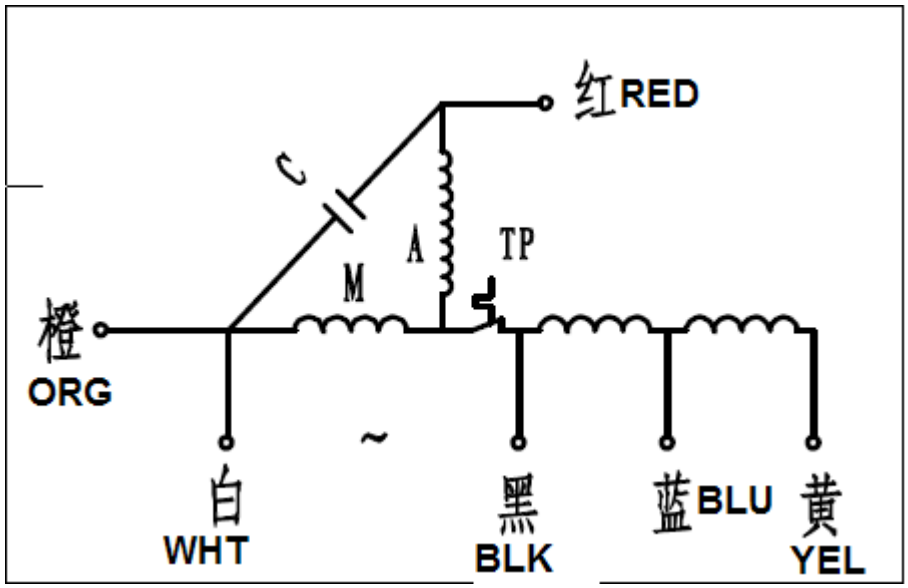
SIC-70CW-F1100-6

36K-- DC MOTOR

SIC-70CW-F1140-3

48K,60K

Y7S423C032



WHITE-BLACK:42.69 BLACK-BLUE:9.19 BLUE-YELLOW:9.09

RED-BLACK:36.41

8. CHECKING COMPONENTS

Test in resistance.

TOOL: Multimeter.

Test the resistance of the main winding. The indoor fan motor is fault if the resistance of main winding 0(short circuit)or∞（open circuit）.

Test in voltage

TOOL: Multimeter.

Insert screwdriver into to rotate indoor fan motor slowly for 1 revolution or over, and measure voltage “YELLOW” and “GND” on motor. The voltage repeat 0V DC and 5V DC.

Notes:

1) Please don’t hold motor by lead wires.
2) Please don’t plug IN/OUT the motor connecter while power ON.
3) Please don’t drop hurl or dump motor against hard material. Malfunction may not be observed at early stage after such shock. But it may be found later, this type of mishandling void our warranty.

8. CHECKING COMPONENTS

2. OUTDOOR FAN MOTOR

MOTOR EXAMINE AND REPAIR

Circuit diagram

AUW-18U4SZ1, AUW-24U4SA1&AUW-36U4SA1—DC MOTOR

18K-- MOTOR MODEL:ARW4401QH

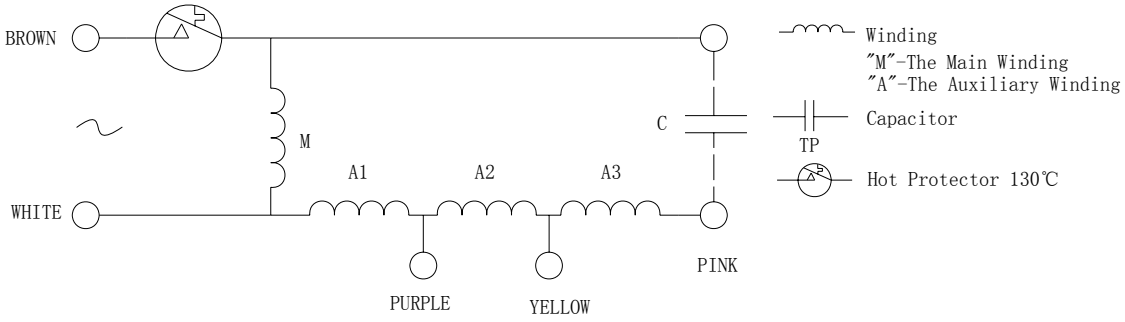
24K-- MOTOR MODEL:SIC-71FW-D8121-1

36K-- MOTOR MODEL:SIC-71FW-D8121-1

Circuit diagram

AUW-18U4SG

YDK29-6I-22:

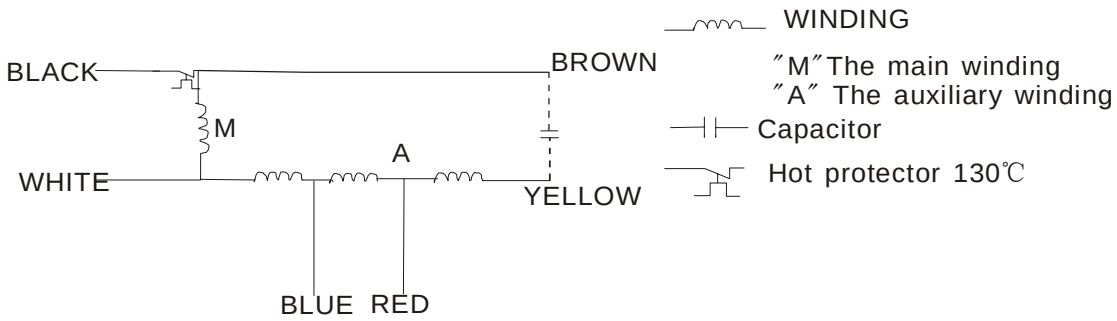


Winding resistance (at 20℃)

M: 283.5Ω A: 180Ω

AUW-24U4SZ

YDK70-6H-3:



Winding resistance (at 20℃)

M: 78Ω A: 80Ω

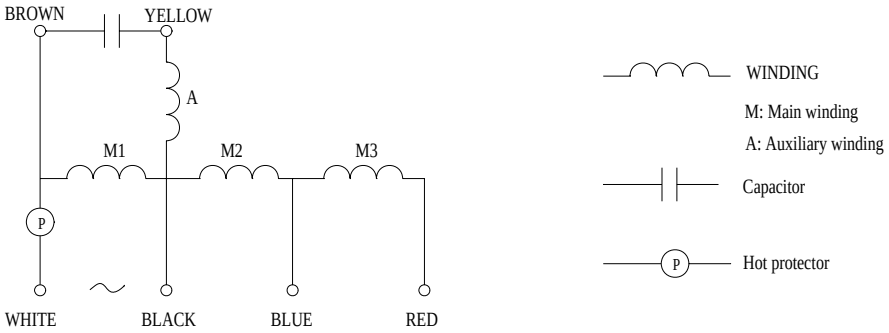
Winding resistance (at 20℃)

M: 283.5Ω A: 180Ω

AUW-36U4SA

YDK95-6-9043

8. CHECKING COMPONENTS

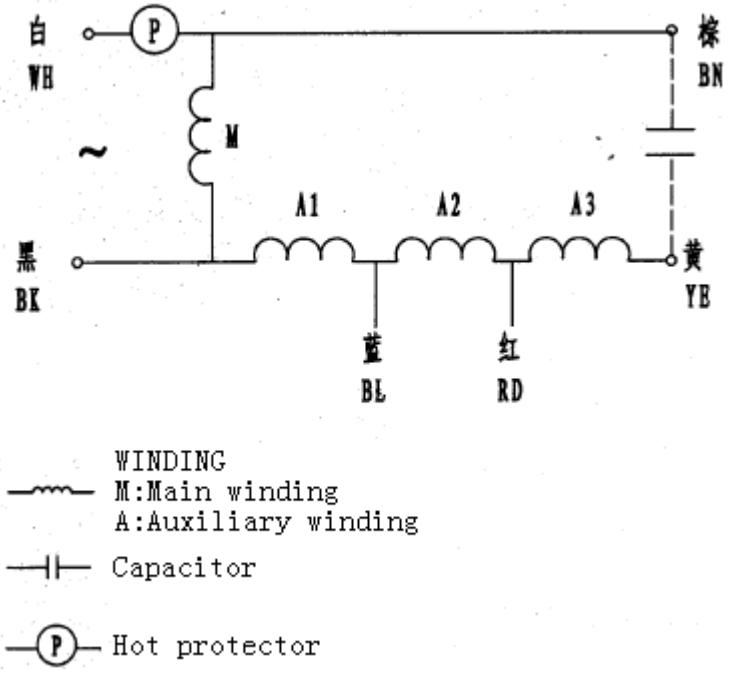


Winding resistance (at 20℃)

M1:59.1Ω M2:20.3Ω M3:15.3Ω A: 85.8Ω

48K,60K

YDK65-6-9024、YDK65-6-9061



Winding resistance (at 20℃)

M:83.0Ω A1:23.4Ω A2:14.0Ω A3: 63.5Ω

Test in resistance.

TOOL: Multimeter.

Test the resistance of the main winding. The outdoor fan motor is fault if the resistance of main winding 0(short circuit)or∞（open circuit）.

Notes:

1) Please don't hold motor by lead wires.

2）Please don't plug IN/OUT the motor connecter while power ON.

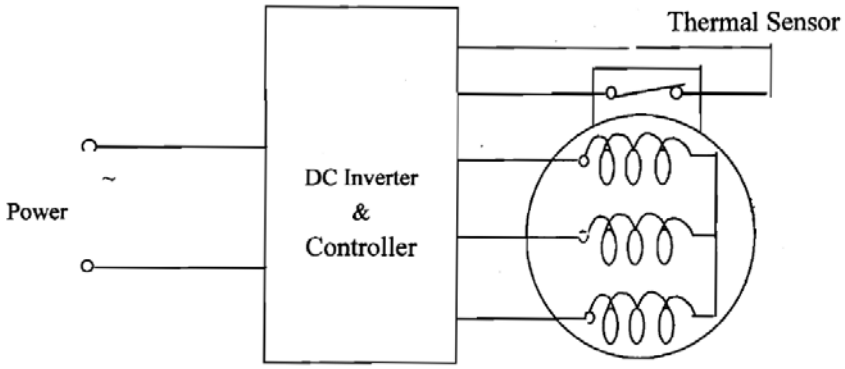
3）Please don't drop hurl or dump motor against hard material. Malfunction may not be observed at early stage after such shock. But it may be found later, this type of mishandling void our warranty.

8. CHECKING COMPONENTS

3. COMPRESSOR

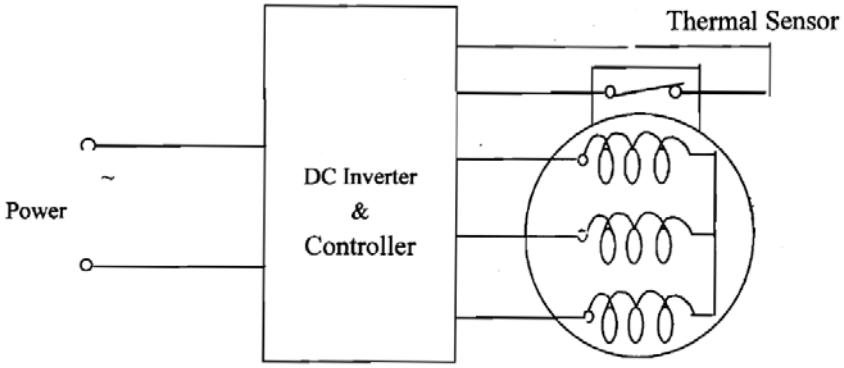
COMPRESSOR EXAMINE AND REPAIR

AUW-18U4SG：DA130S1C-20FZ

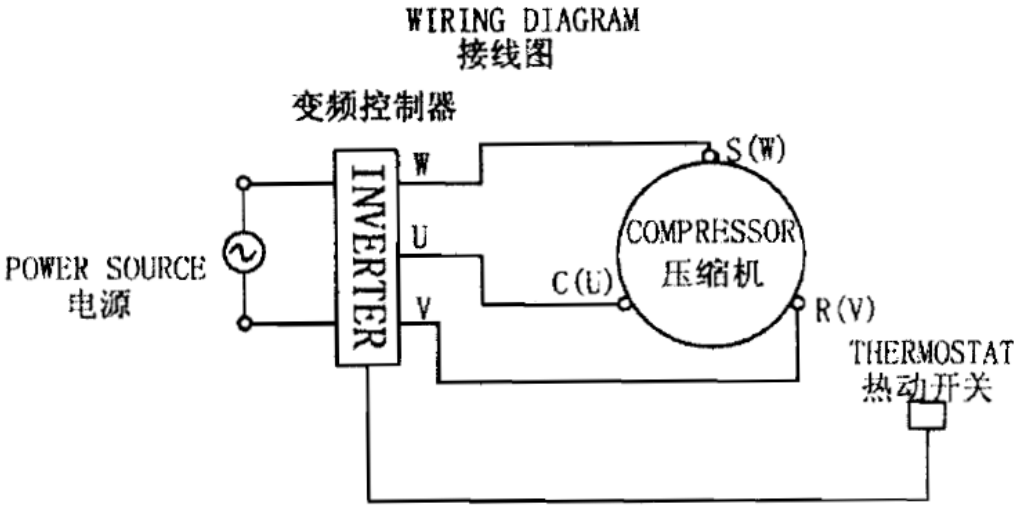


AUW-18U4SZ1

DA131S1B-28FZ



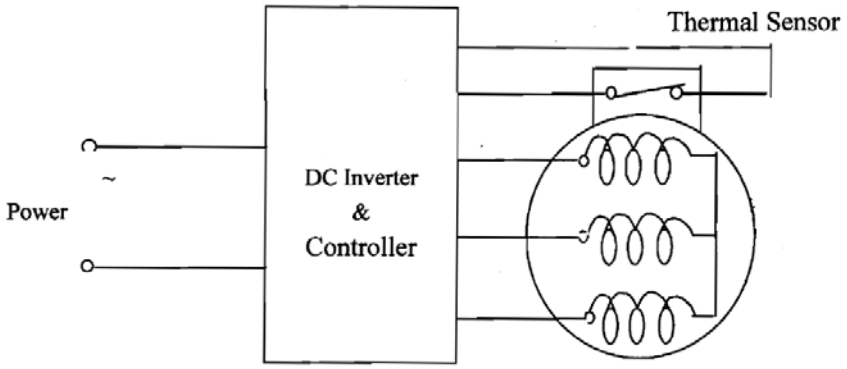
AUW-24U4SZ



8. CHECKING COMPONENTS

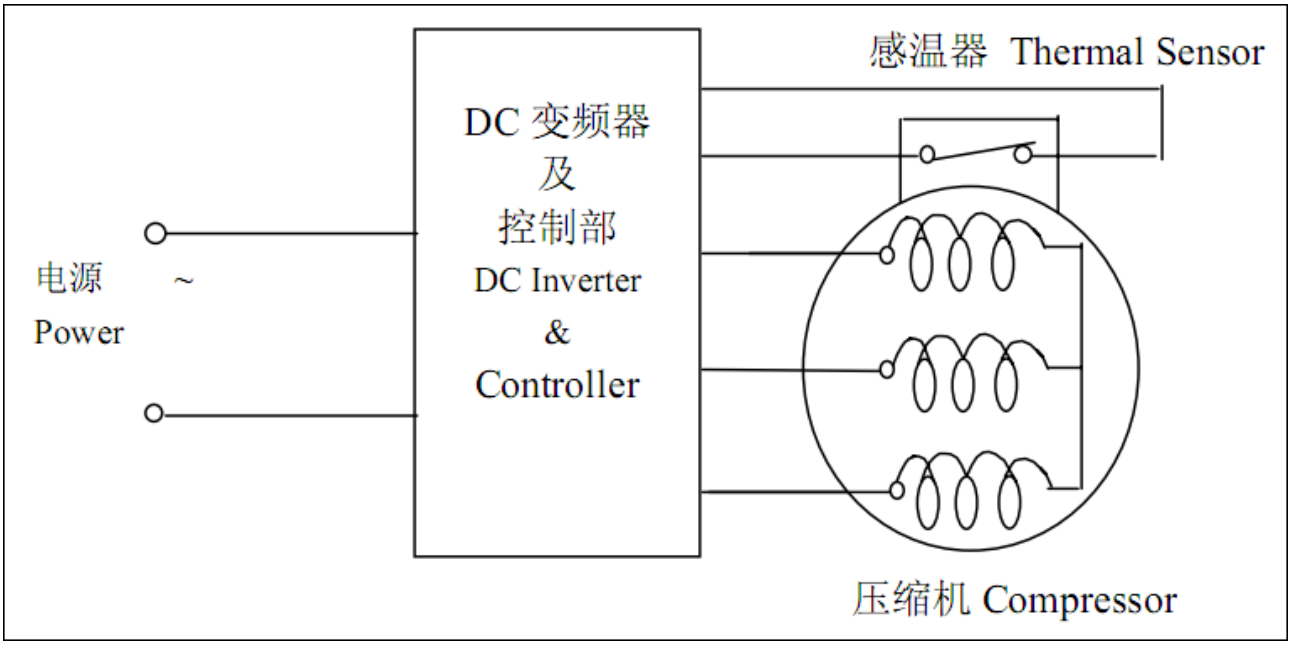
AUW-24U4SA1

DA230S2C-31MT

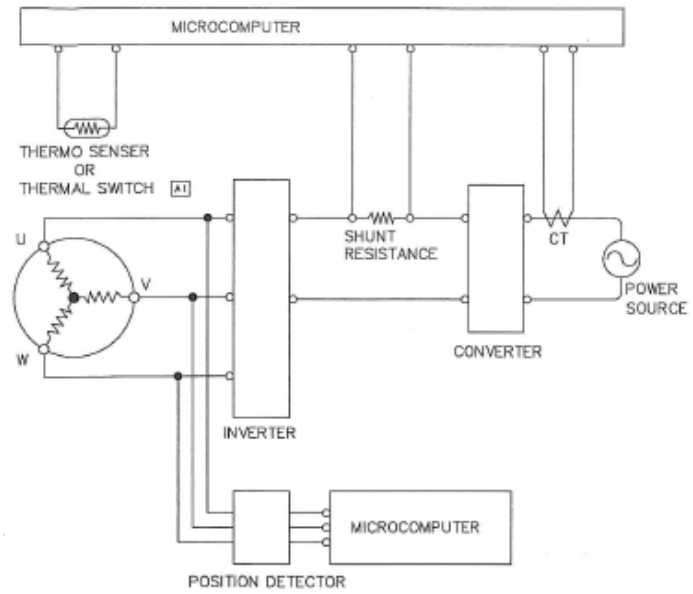


AUW-36U4SA / AUW-36U4SA1

DA250S2C-30MT

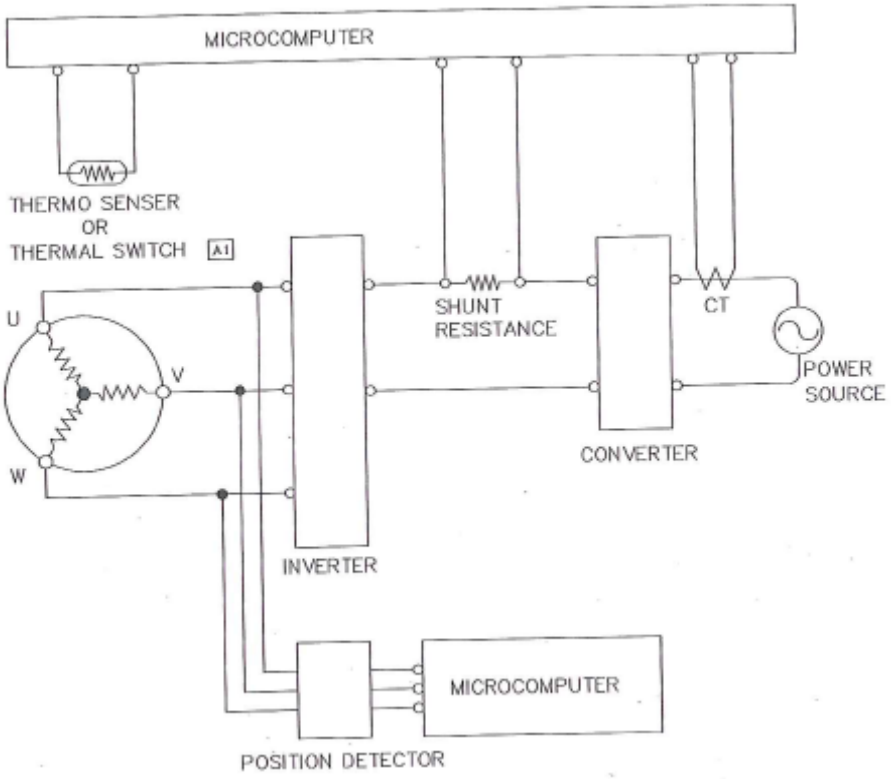


AUW-48U6SP（TNB306FPNMC）



8. CHECKING COMPONENTS

AUW-60U6SP（LNB42FSAMC）



Test in resistance.

TOOL: Multimeter.

Test the resistance of the winding. The compressor is fault if the resistance of winding 0(short circuit)or∞（open circuit）

Familiar error:

1）Compressor motor lock.

2）Discharge pressure value approaches static pressure value .

3）Compressor motor winding abnormality.

Notes：

1）Don’t put a compressor on its side or turn over.

2) Please assembly the compressor in your air conditioner rapidly after removing the plugs. Don’t place the comp. In air for along time.

3）Avoiding compressor running in reverse caused by connecting electrical wire incorrectly.

4）Warning! In case AC voltage is impressed to compressor, the compressor performance will below because of its rotor magnetic force decreasing.

8. CHECKING COMPONENTS

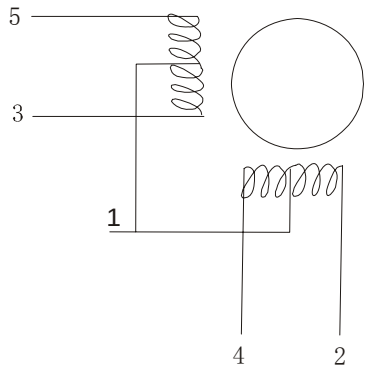
4. INDUCTANCE

Familiar error:

1）Sound abnormality

2）Insulation resistance disqualification.

5. STEP MOTOR



Test in resistance.

TOOL: Multimeter.

Test the resistance of winding. The stepper motor is fault if the resistance of winding 0(short circuit)or∞（open circuit）.

6. FUSE

Checking continuity of fuse on PCB ASS'Y.

1) Remove the PCB ASS'Y from the electrical component box. Then pull out the fuse from the PCB ASS'Y (Fig.1)

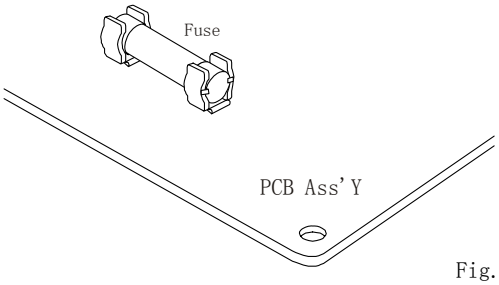


Fig.1

2) Check for continuity by a multimeter as shown in Fig.2.

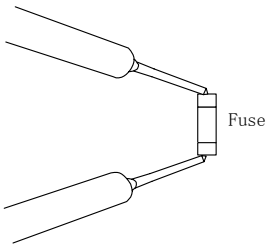


Fig.2

7.CAPACITOR

1) Remove the lead wires from the capacitor terminals, and then place a probe on the capacitor terminals as shown in Fig.3.
2) Observe the deflection of the pointer, setting the resistance measuring range of the multimeter to the maximum value.

8. CHECKING COMPONENTS

* The capacitor is “good” if the pointer bounces to a great extent and then gradually returns to its original position.
* The range of deflection and deflection time differ according to the capacity of the capacitor.

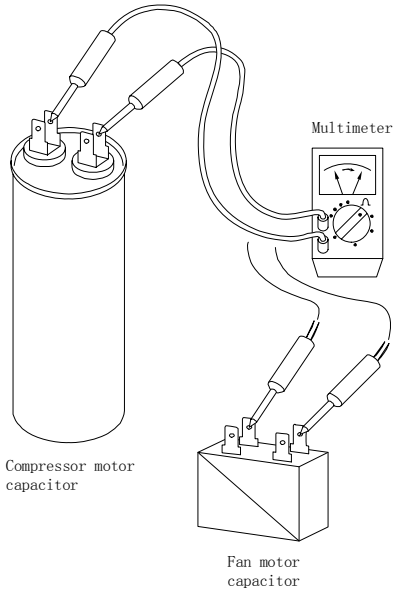


Fig.3